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President's Address

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General Assembly

FOLLOWING the wake of war, men generally have been worried over the state of the world. Ralph Waldo Emerson was obviously worried when he spoke these words, "This time, like all other times, is a very good one, if we but know what to do with it." He was not speaking of war at that time, but had in mind the state of turmoil this country was in about the year 1837 when national administrative policy had all but wrecked American society and the foundations of national credit. In the heat of emotion he said the best time to be born is during a revolution—life is just one revolution after another, a series of crises in which the past is swallowed up and wise men gird themselves to meet the future.

The American people are again worried about national and international happenings and slowly, but surely, they are beginning to realize that America's future is the American people's business. No one but the unwise should be deluded by what they see and hear today. Reams of propaganda flow over the country, whose purpose is to confuse us and to destroy our unity. Bold attempts to legislate foreign ideas come out in the open, yet while these plans are pondered over and usually discarded by well-thinking men, there appear a dozen sinister methods which, cloaked in secrecy, plan to shackle democracy by indirection.

The favorite method seems to have always started with the control of medicine and the management of people's welfare, which in turn rapidly led up to complete and total direction of their everyday affairs and life. The Romans did it, Bismarck did it, Hitler's Germany did it, and what happened? Total collapse every time; accompanied by untold misery and unhappiness for millions of innocent souls. Carelessness or indifference on our part could allow a similar condition to happen here. The seeds are planted, and have taken root in this land founded and dedicated by our forebears to freedom and rugged individualism. It is due to the latter that we are great, and this holds true particularly in medicine. Under the American system a large part of our progress and knowledge has come from sources little known previously, but from minds that were unhampered by regulation and cramping limitations. The individual worker was able to use his God-given senses and evolve methods and discoveries of untold value to mankind. This has been America at its best, and it has always been a good place to live.

Formerly the doctor found it only necessary to practice good medicine. The public knew that he individually and his fellow practitioners collectively always had the welfare of the people at heart. And so they do today. Yet in the past few years we have had thrust upon us certain responsibilities of medical econmics and of medical distribution. While basically, the medical profession is not responsible for the economic ills of this country, we

Read at the General Assembly of the eighty-first annual session of the Michigan State Medical Society, Wednesday evening, September 25, 1946, Detroit.

are willing to do our part in providing a means to avert a family financial crisis in time of sudden or prolonged illness. This is done by providing a system of prepaid medical service, and likewise the hospital group has a plan to cover hospital costs. Michigan is recognized as a leader in the formation of these plans, and now has the widest percentage of coverage in the country. They have succeeded and are succeeding in such a way that nearly all the states in the union now have such plans. No compulsion is needed to make the public take advantage of these plans. Compulsion is not the American method anyway. What the public does need is more information concerning what we are doing and the advantages of the system. Michigan again has come to the fore. During the last year this Society has organized an outstanding Public Relations System with a full-time director. It is our intention that the people of this state shall be made to see that the medical profession has the public welfare at heart always. That it is united in its opposition to philosophies and plans which threaten to lower high standards of practice which it has voluntarily established for itself, and that the control of the medical profession should be limited to the statutes which affect the qualifications of doctors of medicine, and to those which provide for ethical conduct.

We have worked out a contract with the Veterans Administration which provides for home town care of disabled veterans, which carefully provides for retention of private physician-patient relationship. This is an excellent example of decentralized government medicine in which the agency recognizes the problems and rights of the medical profession. This should dispel the accusations that the medical profession is against everything the government proposes. We do insist upon a bargaining right and a willingness of the other party to appreciate our ideals and needs and to bear in mind always the needs of the beneficiary. We'll have none of the so-called planned economy with all its compulsion. The public will have none of it either when they get to know its implications, and that is the job for our public relations department. The people must know more about this, and we'll see that they get what they are hungering for. Not only knowledge, but service as well.

We have a God-given mission in this world, to heal the sick. And it's our duty to protect these people from well-organized attempts to force upon them compulsory plans which are unsound and un-American.

Again quoting Emerson, "This time, like all other times, is a very good one, if we but know what to do with it." Like him, I believe this is a good time to live. Your Society is doing its very best to know what to do with the problem of medical distribution and medical service that will do the greatest good to the greatest number of people. With the help of the people affected, there is no question but that we shall accomplish our purpose.

House of Delegates

EVERYONE here this evening will appreciate the changed conditions which again permit us to hold a regular convention of our State Medical Society, and to know that a large part of our membership is home again after an absence of several years in worldwide conflict. Those of us who were left behind to care for civilian needs, have carried on to the best of our ability, though in doing so there has been a startling number of casualties. Likewise, those who entered the service of our country have made many sacrifices, and some unfortunately have made the extreme one. Better for all of us that we can be re-united once again, and together carry the torch of organized medicine to new hights of perfection. During the past year it has been my lot to serve as your president, and to assume the duties of that honored position, the incumbent can but humbly appreciate the trust you have placed in him and hope that in some small manner he can justify your decision.

I shall release this office in a few days, and will be succeeded by Dr. William A. Hyland, and let me congratulate you on your good judgment in choosing him for your president in 1946-47. His service to you in past years speaks for itself, and I am convinced he will render good leadership in the coming year, which will be an important one from a legislative standpoint. I wish to take this opportunity to compliment your speaker, Dr. Ledwidge. He has proved himself a capable speaker, and has been very helpful to me during my term of office, and I can truthfully say as much for all of the other officers of our Society.

Read at the regular meeting of the House of Delegates, Michigan State Medical Society, Detroit, September 24, 1946.

The past year has been marked with considerable activity by your Society, and our committees on the whole have done excellent work. I cannot name them all here, nor enumerate all they did. You can get a good idea of their accomplishments by reading their written reports, but I do want to call your attention to two or three of these reports.

1. Ethics Committee: This committee reports that no meetings were held within the year. At first thought, we wonder why. But the reason for this inactivity is the fact there were no serious controversies in any of our counties which required attention on a state level. I consider this a healthy state of affairs.

2. Legislative Committee: Inasmuch as the state legislature was not in session during the year, this committee was not very active, but in the coming year there will be much for it to do and you may be sure from past performance, this committee will give good account of itself. I want to point out the importance of this committee, for the Council has given the responsibility of leadership in public relations to this committee, and to the Public Relations Committee. It is charged with the responsibility of investigating any proposed state or federal legislation which might affect the health of the public.

3. Public Relations: I think the most outstanding progress this Society has made is in the field of public relations. We have secured the services of a Public Relations Counsel whose duty is to consult with officers and committees, and to carry out their instructions in order that the Public Relations Plan can be actively and effectively implemented. There has recently been mailed to you a booklet setting forth the future plans of the Michigan State Medical Society, and I commend its contents for your careful consideration in order for you to formulate your own opinion on the projects tentatively planned for 1947. Michigan has been outstanding in acquainting the public with its activities in promoting good health, and to offer service protection against the sting of catastrophic illness, and it is most heartening to see similar activities now shaping up on a national scale.

To demonstrate that our Society has the ability and the will to make whatever study of public need that may arise, is well demonstrated by the activities of our Child Welfare Committee. It co-operated with the American Academy of Pediatrics in its nationwide study of child health care and services, and did this work on a voluntary basis without aid of government funds.

When governmental agencies come forth with worthwhile and workable plans for the public good, the medical profession is willing, and has the means and proper organization to render a service to government wards, provided the private physician-patient relationship is preserved. Our contract with the Veterans Administration is an excellent example of decentralized government medicine, providing home town medical care to veterans, in which the agency recognizes the problems and rights of the medical profession. It pays according to a fee schedule adopted by ourselves, and has accepted our classification of practitioners which seems to be the fairest and most equitable seen anywhere.

Michigan is a proved leader in the field of socio-economics. Our various surveys have shown what the public needs are in medical care, and have solved to a large extent the answer to that need. We have the answer when ill-advised plans are brought forth which would wipe out with the stroke of a pen all that experience we have painfully gained at high cost. Excellent care is offered the public at a minimum of operational cost. We must really have something if outside interests want to get in on our health activities. No doubt they see a chance to set up a large controlling machine, a taxing machine if you please, and away goes all that fine spirit of confidence that has existed between doctor and patient through the centuries. Does anyone think this taxing group will be an economical body? I think not. The people of this country must be prepared for the danger that lies ahead, and that is the job for our public relations department. To spread the truth! To tell them what our service plans have to offer. And here is where unity of purpose comes in. We have two agencies giving health service. One giving health service proper, and the other hospital service only. One cannot well live without the other. True, at times one may be up and the other down, and vice versa according to conditions and circumstances. They can and will survive all storms if they stick together. They must be democratic in operation, truly representative of their component parts, and personalities must give way to public need. None of those things are impossible if level heads get together and

reason out a cure. And when they come out with a united purpose, there will be no pointing of a scornful finger by our legislative-minded and tax-minded adversaries who would want to say, "I told you it wouldn't work, we need government medicine." Give them a united front and they won't like it. We have nothing to fear if we keep ourselves right. We must make known our purpose, and these same people will grapevine the word along to our legislators something like this: "We want good medicine, honest medicine. We want our doctor of choice; just leave him alone."

Now, gentlemen, you are here to deliberate on quite a number of issues, and resolutions. My term of office will be over in another two days, and it seems presumptuous for me to stand here, and tell you what we have done, or what we hope you will do during this session.

In San Francisco, Mr. Upton Close told a meeting of state officers that we are in big businenss, six billion dollars worth, and apparently don't know it. He advised that we play the part: let the people know we are Big Business, let Congress know we are Big Business, and then, and only then would we command the respect that is our due, and likewise would be looked upon as the authoritative body in matters medical.

In electing you as our delegates, we, the doctors of Michigan, feel that the affairs of our Society are in good hands. Certainly the events of the past year have alerted us to our responsibilities as protectors of the public's health, and to our need for good citizenship. In leaving you, I wish to express the great pleasure it has given me to be associated with you for six years as councilor, and the past year as your president. I wish you all Godspeed in your endeavors.

MSMS

A SOLID PROFESSION

The Secretary (Dr. Charles Hill) announced the returns of voting on the Insurance Acts Committee's recommendation to insurance practitioners *to place their resignations in the hands* of the committee unless the Minister was willing fully to apply the Spens Report to the current capitation fee. *He said that up to the previous day* reports had been received from 146 panel committees. In sixty-three areas the voting was unanimously in favour of the I.A.C. Recommendation; in twenty-nine areas there was one dissentient; in fourteen areas two dissentients; and in forty areas more than two, though in most of these areas the number of dissentients did not exceed five. Over 95 per cent had expressed their willingness to resign if called upon.—*British Medical Journal*, November 2, 1946.

Surgical Procedures for Carcinoma of the Rectum and Rectosigmoid

By Charles W. Mayo, M.D.
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As the average age of mankind increases, those disease processes to which has been allotted the task of maintaining human life balances, will assert their rights more vehemently. Malignant disease in some form is one of the most potent forces that man must combat in order to lengthen a productive life and delay death. It is second only to heart disease.

The problem of what a physician or surgeon can do when dealing with malignant disease is not wholly dependent on him; it also depends on the individual patient involved, from the standpoint of how quickly he has recognized the changes of health and how promptly he has sought adequate treatment. However, once a patient has placed himself or herself in a physician's hands for advice, direction or treatment, the problem becomes the physician's, and he succeeds or fails in his mission in life depending on the thoroughness of his examination and on the wisdom of his advice and treatment.

Since this discussion is concerned with carcinoma of the rectum and rectosigmoid, it would seem important to know how frequently this pathologic condition occurs in this situation, as related to the entire colon and to the entire gastro-intestinal tract. Approximately 64 per cent of carcinomas of the colon and rectum are situated in the rectosigmoid, rectum and anus, within the reach of the finger. If one includes both growths palpable by the finger and those which can be visualized by sigmoidoscopic examination, about 75 per cent of the growths of the colon and rectum fall in this class. In other words, a majority of the malignant lesions of the colon and rectum can be diagnosed by careful ex-

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amination with the finger and with the sigmoidoscope. It follows that there is little excuse for the physician who treats hemorrhoids when a malignant lesion is present in these regions. If one considers the entire alimentary tract, including the esophagus, stomach, small intestine, colon and rectum, 37 per cent of the carcinomas occur in the colon and rectum. These facts suffice to testify to the importance of a thorough examination when signs and symptoms suggest that consideration of the colon and rectum is indicated. The physician who is careful rewards the occasional patient and himself by discovering an early unsuspected malignant lesion at a time when, with all reasonable possibility, cure can be assured, often by a relatively simple procedure.

The surgeon who assigns himself the responsibility and task of dealing with malignant lesions must be familiar with the variety of methods that have been devised, tried and proved efficacious for particular types of conditions and, in addition, must be sufficiently ingenious to combine such methods or conjure up new technical means to apply to individual cases. The important point is that each patient is different from every other patient and each lesion has its own best way of being dealt with; it is the surgeon's obligation to know and use the ideal surgical procedure for each situation.

If a surgeon consistently has "bad luck" with a specific type of operation, the tendency is to blame the operation rather than blame his selection of that operation for the individual. The risks involved in surgery of the colon are high, at best, but if one is to effect a cure, rather than palliation, chances must be taken. However, the right decision as to when to take the risk, and the estimation of the risk, come only with study and experience. By study is meant keeping complete records with follow-up data regarding patients, reading the pertinent literature, research and travel. By experience is meant the sum and substance of all that all surgeons' senses can accumulate by dealing with these patients and the keeping of such knowledge at one's fingertips for use at the proper time. There is no more discouraging feeling than that of wishing one had done something when it already is too late.

Some surgical procedures should be selected only rarely; some should be selected frequently but wisely. Properly selected, there is no operation that should never be done and I say this in spite of the fact that there are some operations that I never have done and probably never will do.

The field of proctology differs in different places. At the Mayo Clinic it excludes resection; such cases fall into the field of the colonic surgeon. The decision in debatable cases is a joint one but doubt usually weighs heavily in favor of resection.

Pedunculated polyps and small, sessile polyps without ulceration and within reach of the proctoscope or sigmoidoscope will practically always be amenable to fulguration, regardless of which wall of the bowel they occupy. They practically always show malignant change of low grade 1, according to Broders' classification. It is of utmost importance that these growths be looked for and be adequately treated by fulguration, as potentially dangerous lesions, despite their small size.

Among the surgical procedures which in my opinion rarely should be done is resection from below, or by the perineal route alone, without combining it with an abdominal approach. An instance when I used such a method with excellent results, however, was the case of a woman forty-two years of age who was four months' pregnant and who had an annular non-ulcerated mobile adenocarcinoma of grade 2, according to Broders' classification, in the midportion of the rectum, which encircled three-fourths of the lumen. The incision in this instance was made between the sphincter and the coccyx. The coccyx was removed and the operation consisted of resection and end-to-end anastomosis. The patient returned later for cesarean section, and follow-up data show her and the baby to be alive and well six years after the surgical procedure.

This case is used as an example because of the divided opinion of consultants. The questions debated involved the wisdom of choosing the method described as compared with colostomy followed by posterior resection or sacrifice of the uterus and fetus by a Porro operation in addition to a one-stage or two-stage combined abdominoperineal resection. Pre-operative decisions are not always simple ones to make. The proof of the correctness of the decision is in the result obtained over "the long pull."

Palliative colostomy naturally falls into any consideration of operations for malignant lesions in the rectum and rectosigmoid as does also an operation which might aptly be termed a potential colostomy.

Regarding the former procedure, when the case

is wisely selected for colostomy and the operation is well done, considerable relief for the patient may be expected. Palliative colostomy should be performed for advanced degrees of obstruction in the presence of local or distant metastasis, or a combination of the two, when in the opinion of the experienced surgeon the degree of spread, the grade of the malignant lesion, and the general condition of the patient justify such an attempt in the human interest.

The type of colostomy that I employ in these instances is one performed through the incision of exploration—a left rectus incision which retracts the rectus muscle laterally. The sigmoid is divided at a selected point, the lower barrel is brought out at the lower angle of the incision and the upper barrel is brought out through a split in the left rectus muscle, after the anterior and the posterior fascia of the rectus have been cut transversely to prevent obstruction. A Payr clamp is left on the lower barrel of bowel and a rectal tube is tied in place in the upper barrel. It is important to separate the two openings to prevent spilling of the fecal contents from the upper into the lower barrel of bowel.

The potential colostomy I do not perform often. It is employed in those instances in which distant metastasis is present but is not extensive, in which the growth is locally inoperable and obstruction, although imminent, is not sufficient to justify immediate establishment of a colonic stoma. It consists of a loop of sigmoid being brought through the fascia of the rectus and left lying under the deep layer of the superficial fascia in such position that if and when it becomes necessary to establish relief of obstruction it can be done simply by a cautery incision without the patient's having to undergo the unpleasantness of a colonic stoma in the interim.

It must be kept in mind that palliative colostomy, on the average and in large series of cases, does not prolong life more than a month or two. Therefore, in determining whether or not to perform this procedure, in fairness to all concerned, one must also evaluate other palliative measures of a medical nature, such as the low residue and eventual nonresidue diets.

This paper is concerned with four main surgical procedures for carcinoma of the rectum and rectosigmoid, the selection of one of which, with whatever modifications the individual surgeon may make, will fit the majority of cases that are beyond the stage for fulguration. The four procedures are (1) combined abdominoperineal resection in one stage or in two stages with abdominal colostomy; (2) combined abdominoperineal resection with preservation of the sphincters; (3) anterior resection with anastomosis, and (4) colostomy and posterior resection.

In discussing the four surgical procedures, I do so cognizant of the fact that there are some surgeons who believe that anterior resection and anastomosis should never be performed for lesions of the rectum and very rarely for those in the rectosigmoid; also that there are those who are convinced that combined abdominoperineal operation with preservation of the sphincters is not a good operation. However, I have also noted that those who would appear to be opposed unalterably to this latter technique have never seen it performed by those who have performed many such operations.

Combined Abdominoperineal Resection in One Stage

Giordano, in 1896, as far as records can be found, performed the first combined abdominoperineal resection without establishing a preliminary colostomy. Miles, however, can be credited with putting on the map the one-stage abdominoperineal procedure with establishment of a single-barrel colostomy.

Up to and including the present, the one-stage combined abdominoperineal resection is, in principle, my choice of surgical procedures for malignant lesions of the rectum and rectosigmoid. Like other surgeons, I have developed a technique, operative and postoperative, which has worked out well for my service, and my experience with the operation prompts the following evaluation.

1. It is an operation that can be done in any case of malignant lesion of the rectum or rectosigmoid in which any other radical procedure can be accomplished.

2. The mortality rate for the operation in the high risk patients or in the aged is no greater, or may be less, than in other single or multiple-stage operations.

3. It is the most reasonably radical of surgical procedures for malignant lesions of the rectum and rectosigmoid.

4. Abdominal colostomy, properly performed, is neither a stigma nor difficult to control in the vast majority of cases.

5. The ultimate prognosis will average best following one-stage combined abdominoperineal resection.

6. There are instances in which the operation may be carried out as a palliative procedure with benefit to the patient in the presence of known metastasis to the liver.

In my total series of 296 cases of one-stage combined abdominoperineal resections from April, 1934, to January, 1943, when my work was interrupted by the war, 278 patients survived the operation, a mortality rate of 6.1 per cent. Eleven cases were designated as palliative. Among the 285 non-palliative cases, in 141 (49.5 per cent) local extension or nodal involvement was found at the time of operation. Of the 267 survivors in the non-palliative group, all patients were traced except one and this case necessarily was omitted from our calculations.

Of the 266 remaining cases in the non-palliative group, there were 133 cases in which there was no local extension or nodal involvement and the liver was found to be free of metastasis. In this group of 133 cases, the three-year survival rate was found to be 86.3 per cent and the five-year survival rate was 72.5 per cent.

In this non-palliative group, there also were 133 cases in which there was local spread of the malignant process, including five cases in which questionable involvement of the liver was noted at the time of operation. In this group, the three-year survival rate was found to be 57.2 per cent and the five-year survival rate 37.9 per cent.

For the total non-palliative group, the three-year survival rate was 71.9 per cent and the five-year survival rate was 55.8 per cent.

Combined Abdominoperineal Resection in Two Stages

I have not performed a two-stage operation for lesions in the region under discussion for twelve years. It is my opinion that a one-stage operation is at least as immediately safe and, on the basis of the factor of time as related to morbidity, can be supported on all counts. In other words, it would be a most rare instance in which I would select a two-stage operation as opposed to a one-stage procedure.

Anterior Resection and Primary Anastomosis

Surgeons, as related to their opinion of anterior resection for malignant lesions in the rectum and rectosigmoid, fall into two distinct groups: (1) those unalterably opposed to it and (2) those who believe that there are instances in which it is the operation of choice. Those who believe that it is not the operation for the region of bowel under discussion do so on the basis that it is not a radical enough operation and because of the frequency of sequelae, such as stricture.

Those surgeons who do perform anterior resection do so with varying frequency. It is rarely that such an operation is attempted when the growth is situated 6 cm. or less from the anal margin. Dixon, in reporting 340 cases, had ninety cases in which the lesion was situated between 6 and 10 cm. from the anal margin, 132 from 11 to 15 cm., and 118 from 16 to 20 cm.

Some surgeons who employ this operation always perform primary defunctioning transverse colostomy, followed later by resection and still later by closure of the stoma, making a three-stage operation. Others perform primary resection and anastomosis without colostomy.

Personally, I do not often perform anterior resection for lesions of the rectum or rectosigmoid, preferring the one-stage combined abdominoperineal resection. When I do select it, the lesion must be mobile, non-penetrating and non-ulcerating. My objection to the operation in general is that it is not sufficiently radical. Selection of it depends also on a clean colon, inasmuch as I rarely employ preliminary colostomy and in at least half of the instances I perform a modification of the "pull-through" operation described by Balfour, in which a rectal tube is tied into the upper barrel of colon and intussuscepted or invaginated into the rectum.

Combined Abdominoperineal Resection With Preservation of the Sphincters

This operation has been abused more than is its due. Among its advocates in this country have been Babcock, Bacon and Waugh. I have performed several operations of this type. When properly performed, it is as radical or almost as radical as the usual combined type of operation. There is agreement that growths situated less than 6 cm. from the anal margin should not be removed by this method. Reports of satisfactory control by the preserved sphincters run as high as 80 per cent. Technically, the operation is but slightly more complicated than the usual one-stage combined abdominoperineal resection. The tendency now in

dissecting out the anus and lower portion of the rectum is not to cut but to stretch the sphincters sufficiently for delivery of the dissected portion of the bowel and the growth. The patients on whom I have performed this operation have had a somewhat more stormy convalescence and have complained more frequently of pain and vesical complications than have those who have undergone the usual one-stage combined procedure. However, it is an operation that may well grow in favor as refinements develop, and certainly it has a definite place in the list of operations for malignant lesions of the rectosigmoid and of the rectum situated more than 6 cm. from the anal margin.

Colostomy and Posterior Resection (Two-Stage)

The operation of performing a loop sigmoid colostomy and later performing a posterior resection is one of the old stand-by operations for attacking the growths under discussion. To belittle the procedure which has stood patients and physicians in such good stead would be an injustice, would show ingratitude. This operation is still performed and with greater frequency than many suppose. Personally, I do not use the method since other operations have superseded it. Other than the fact that it is a stage procedure, it is definitely not as radical as the combined abdominoperineal resection, nor is it any safer. One other objection that I have to the posterior resection is that there seems to be no satisfactory way of dealing with the lower segment of sigmoid between the stoma and the pelvic peritoneum unless it is removed later. Posterior fistula from the stump to the perineal scar is fairly common, regardless of whether the inverted stump of sigmoid is placed above or below the peritoneum.

There may be instances in which posterior resection can be used and in which it is useful, but for me, colostomy followed by posterior resection is a part of the historical record of the progress of colonic surgery rather than an operation to be performed in the present day.

Conclusions

If I were to have available but one operation for malignant lesions of the rectum and rectosigmoid, I should select the one-stage combined abdominoperineal resection as having, in my opinion, satisfied most nearly the requirements for the care

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Surgery of the Pancreas and Lower Biliary Tract

By George Crile, Jr., M.D.
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THIS DISCUSSION OF surgery of the pancreas and lower biliary tract is more a statement of the problem than a presentation of its solution. Despite the remarkable advances in physiology and technique that have enabled us to attack problems which were formerly considered hopeless, much remains to be done before we can feel satisfied with the end results of treatment. In most cases of carcinoma, diagnosis is still established too late to enable treatment to represent more than palliation. And in the case of pancreatitis the etiology of the disease is still in dispute, and the treatment is of necessity empiric and unsatisfactory.

Chronic Recurrent Pancreatitis

The type of pancreatitis which I wish to discuss is not the familiar acute or hemorrhagic pancreatitis which goes on to death or recovery but is the so-called chronic recurrent pancreatitis described by Comfort.[2] This disease is characterized by recurring episodes of pancreatic pain often occurring with progressive frequency, intensity, and duration over a period of many years and frequently resulting in loss of much weight, in chronic invalidism, and occasionally in addiction to morphine.

Chronic recurring pancreatitis is probably more common than is generally recognized. In the past year I have encountered four proved, one probable, and two or three possible cases of the disease. A careful analysis of all cases of upper abdominal pain, unexplained by disease of the stomach, duodenum, or gall bladder, will unquestionably reveal increasing numbers of these cases.

There is no known specific medical or surgical treatment for chronic recurrent pancreatitis. In

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some instances drainage of the gall bladder or common duct appears to have resulted in improvement of the symptoms, but in the more severe cases this has not invariably been true. The surgeon is more apt to encounter patients exhibiting what appears to be one of the complications of recurrent pancreatitis, i.e., pancreatic lithiasis.

The majority of cases of chronic recurrent pancreatitis that I have seen have exhibited the complication of pancreatitic calcification. In six of eight cases, the calcifications were distributed throughout the entire pancreas and were accompanied by marked fibrosis of the entire organ. The question arises as to whether the stones are the cause or the result of pancreatitis. Although this point is difficult to prove, Dr. Comfort has seen cases in which the calcification appeared and progressively developed while the patient was under treatment for chronic pancreatitis.

It seems probable that the inflammatory process results in a deposition of calcium in the pancreatic tissue.

Calcified areas of the parenchyma may separate and accumulate in the ducts, and in many instances the main pancreatic duct becomes obstructed by the calcified material. Chemical studies of pancreatic calculi show that they are composed of calcium carbonate and this is deposited around a nucleus of tissue-like material which does not dissolve in acids. This finding lends further support to the belief that the stones are the end result of calcification of the parenchyma of the pancreas.

Insufficiency of both external and internal secretions of the pancreas may occur as a result of progressive fibrosis and atrophy. The insufficiency of the external secretion may be increased by obstruction of the duct by stones. This obstruction may well produce further fibrosis of the parenchyma and eventually may cause further destruction of the already damaged islet cells. Diabetes is therefore a common complication of chronic recurrent pancreatitis. Table I shows an analysis of eight cases of pancreatic lithiasis.

I have had no experience with the surgical treatment of chronic recurrent pancreatitis prior to the development of calcifications. In one case, the common bile duct and gall bladder were distended, in spite of the absence of jaundice, and it is conceivable that drainage of the biliary tract or a cholecysto-enterostomy might have afforded relief. In the other cases, there was no evidence of disturbance of the biliary tract, and it is difficult to see how drainage could have altered the symptoms.

TABLE I. EIGHT CASES OF PANCREATIC CALCULI

Age: 21 to 50 Av. 42	
Sex: 7 male 1 female	
Duration: 6 wks. to 18 yrs. Av. 7½ yrs.	
Loss of wt.: 10 lbs. to 80 lbs. Av. 38 lbs.	
Pain: Epigastric or RUQ colic	
Radiation: Back, 4; L. shoulder, 1; R. shoulder, 1	
Pain follows meals	3
Diarrhea	3
Fat in Stools	2
Vomiting	5
Hematemesis	1
Diabetes	5
Amylase: not done, 4 normal	4
Alcoholism	2
Operation	5
Removal of calculi	1
Pancreaticoduodenostomy	3
Resection	1

Since the most severe and intractable cases of chronic recurrent pancreatitis appeared to be those in which calcifications develop, it is entirely possible that the calcifications, by blocking the pancreatic duct, contribute materially to the pancreatic insufficiency and to the pain. It was hoped, therefore, that simple removal of the calculi might result in relief of symptoms.

The literature contains reports of fifty-eight cases in which stones have been removed from the pancreas, but unfortunately the progress of these patients following operation is rarely recorded, and there is no way of judging whether or not lasting relief of symptoms has been obtained. Judging from our experience I doubt if the results of simple pancreatolithotomy have been good. In the first place, the calcifications are diffusely scattered throughout the entire pancreas and are not confined to the main duct. In every case there was a central deposit of dense calcium sometimes forming an irregular single calculus as large as 2 cm. in diameter located in the head of the pancreas, just proximal to the junction of the pancreatic duct with the duodenum. Removal of this main calcification presents no difficulties, and the obstruction to the flow of pancreatic juice apparently is relieved following its removal. But the calcifications in the parenchyma of the organ and in the finer ducts are rough, adherent, crumble easily, and are impossible to remove completely even when multiple incisions into the main pancreatic duct are made. Even if enough of the stones could be removed to relieve the obstruction, what assurance would one have that the stones in the finer radicles would not move down into the main duct again, block the flow of pancreatic juice, and cause pain?

It was hoped that making a large anastomosis between the dilated pancreatic duct proximal to

the obstruction and the duodenum might avoid this contingency and afford lasting relief from the symptoms of obstruction. Pancreatoduodenostomy was therefore done in two cases.

The duodenum was mobilized, reflected medially, and the pancreatic duct anastomosed to an opening about 2 cm. long in its wall. One of these patients obtained immediate relief of the constant pain, which had necessitated his taking morphine in increasing doses for the past year, and left the hospital in ten days free of pain and taking no morphine. Within a week, however, the pain recurred and, according to the patient, has persisted and requires the continual use of morphine. It is difficult to evaluate the result in this case because the issue is clouded by the possibility of addiction.

In the second case, the same operation was performed and has been followed by complete relief of pain, gain in weight, and subsidence of the fatty diarrhea. At times the patient still has as many as five or six stools a day, but this is comparable to from fifteen to twenty before operation. He feels well and has returned to work. The severity of the diabetes has not changed. It is now six months since operation.

In the third case, a large mass of calcium carbonate was removed from the pancreatic duct in the head of the pancreas. Following this an attempt was made to follow the duct through into the duodenum, and in attempting to introduce an instrument, there was a sudden release of obstruction and the instrument plunged through into the bowel. It was impossible to state with certainty whether this passage was through the pancreatic duct or whether it was a false passage. In any case, one limb of a large T tube was placed through the opening into the duodenum, the other was left in the proximal part of the pancreatic duct, and after closing the pancreas around the tube the stem was brought out through the abdominal wound.

The patient's convalescence was uneventful, but his subsequent progress has been difficult to evaluate. His attacks prior to operation had come at irregular intervals varying from a week to a month apart. In addition, he was a chronic alcoholic, poorly controlled by his association in Alcoholics Anonymous. Soon after his discharge from the hospital and while the T tube was still in place and draining clear pancreatic juice, and while the distal limb was lying unobstructed in the duodenum, as proved by roentgenogram after injection of opaque material, the patient experienced as protracted and severe an attack of pancreatic pain as he had ever had. A course of x-ray therapy to the pancreas gave no relief. After about ten days the symptoms subsided, and for the past three months he has been quite well with only occasional attacks of pain. When the pain occurs he sometimes uses alcohol. The T tube was removed a week ago (three months after operation), the sinus is still draining pancreatic juice, and the patient is free of pain. It is as yet too early to evaluate the final result, but it is significant that a typical attack of pancreatic pain occurred while the pancreatic duct was unobstructed and draining freely both externally and into the duodenum.

This experience suggests that the pain may be related to a persistence or recurrence of the inflammatory process in the pancreas or to obstruction of the finer radicals by small calcifications. It is also possible that the T tube may have contributed to the pain and that, following its removal, the patient will obtain relief of his symptoms.

My first experience with pancreatic lithiasis was in the U. S. Naval Hospital, San Diego. A young man gave a history of repeated severe hemorrhages from the upper gastro-intestinal tract and of recurrent episodes of severe, upper abdominal, colicky pain. This case has been reported in detail,[3] but the significant findings were a filling defect demonstrable by roentgenogram and fluoroscopy in the second portion of the duodenum.

At operation a fistulous tract was found leading from the second portion of the duodenum into the head of the pancreas.

A number of large and small stones were removed through this tract, following which there was a gush of pancreatic juice under pressure. In this case the calcification was confined to the head of the pancreas. The patient remained well for a year but then developed some recurrence of pancreatic pain. It is not known whether the calcifications have recurred.

In the fifth operated case, the calcifications were confined to the head of the pancreas, and the common duct and gall bladder were dilated. Dr. T. E. Jones resected the involved portion of the head of the pancreas, divided the duodenum, placed the cut end of the pancreas into the proximal end of the duodenum, left a T tube in the common bile duct, and re-established gastro-intestinal continuity by means of a gastro-enterostomy. Con-

valescence has been uneventful, but it is too early to evaluate the results.

Cancer of the Pancreas

The unfavorable prognosis associated with carcinoma of the pancreas is not dependent upon any unusual degree of malignancy of its tumor or upon the technical difficulties associated with their removal. Carcinomas of the pancreas have an unfavorable prognosis simply because the diagnosis is not made until the tumor is of such size that it has invaded and obstructed an adjacent organ—the common bile duct—or until it has metastasized or penetrated its capsule to cause pain. If we were unable to make the diagnosis of carcinoma of the sigmoid until parietal pain or evidence of obstruction of a ureter or an adjacent loop of small bowel were present, the situation in regard to curability of these lesions would be comparable. It is axiomatic in treating cancer that once the tumor has extended out of the organ in which it originated, the prognosis is poor. What is needed, therefore, is a means of establishing the diagnosis while the tumor is still confined to the pancreas. Although it is possible that measurements of the external secretion of the pancreas may lead to an accurate way of establishing the diagnosis of obstruction of the pancreatic duct at a time when the tumor is curable, at the present time there is no way to establish the diagnosis of carcinoma of the body of the pancreas before it has advanced to an incurable stage.

The indefinite symptoms of loss of weight and vague, upper abdominal distress are scarcely sufficient to bring the patient to his physician, and by the time that progressive loss of weight and pain have led to the suspicion of an organic lesion, the disease is almost always incurable.

I know of no instance of a cure following resection of a carcinoma of the body or tail of the pancreas except in those rare instances of islet cell tumors exhibiting symptoms of hyperinsulinism. Exploratory operations for lesions in this location are justifiable only in that occasionally the diagnosis is erroneous and some unsuspected and correctible condition is found.

Carcinomas of the head of the pancreas carry a somewhat more favorable prognosis. When the tumor arises in proximity to the common bile duct and jaundice occurs early, the lesion may be resectable. If there is not too much delay in surgical exploration the mortality rate of radical pancreatoduodenectomy is now reasonably low, but if the jaundice is allowed to continue for months before the diagnosis is established, the liver is irreparably damaged, and the mortality rate following even palliative procedures is high.

As an example of the potential curability of some of these tumors, a man thirty-seven years old was subjected to radical pancreatoduodenectomy for a highly differentiated carcinoma of the pancreas. This was before the discovery of vitamin K, and it was necessary to restore bile to the intestinal tract before resecting the tumor. A cholecystogastrostomy was performed, and later the pancreas and duodenum were resected. The patient lived in good health for over a year but then developed chills, fever, and jaundice, and died. It was assumed that the obstruction was due to a recurrence of the carcinoma, but autopsy revealed a stricture of the cholecystogastrostomy and no recurrence of the tumor. It is quite likely that this patient would have remained well if the stoma had not contracted.

The mortality rate increases in direct proportion to the duration of the jaundice. A favorable case from the standpoint of permanent cure may end fatally as a result of delay in advising operation.

A man fifty-nine years of age who had been jaundiced for more than six months was found at operation to have a highly differentiated carcinoma of the ampulla of Vater. Radical resection was performed, but the patient died on the fourteenth day after operation with dehiscence of all anastomoses and of the abdominal wound. Autopsy showed no evidence of metastasis. The powers of healing had been so profoundly altered by the long-standing jaundice that the patient could not survive.

A minister of seventy-eight, on the other hand, was recently subjected to radical pancreatoduodenectomy for cancer of the pancreas. His convalescence was uneventful, he left the hospital in two weeks, and one month after operation preached a sermon. This patient had been jaundiced only three weeks prior to operation.

The development of a complete obstructive and relatively painless jaundice in an elderly man, associated with a high icteric index, absence of bile in the stool, absence of urobilin in the urine, and the presence of palpable liver and gall bladder, suggest the diagnosis and justify an exploratory operation. The tests of liver function are of

little value in the differential diagnosis of a deeply jaundiced patient.

If the patient is obese and the gall bladder cannot be felt, peritoneoscopy will furnish the desired information as to its size and appearance. If the appearance of the liver and gall bladder are consistent with obstruction of the lower biliary tract, operation should be performed as soon as is practicable. The one-stage procedure is preferable if the duration of the jaundice is short.

If the pancreatic duct is implanted into the intestine the undesirable complication of pancreatic fistula is avoided, and more important, the patient does not suffer from a deficiency of the external secretion of the pancreas. Some patients do well without pancreatic juice, but others have much difficulty in maintaining nutrition in its absence. Since there is no way of predicting before operation whether the patient will or will not get along without pancreatic juice, it is better to anastomose the pancreas to the gastro-intestinal tract, either by inserting its cut end into the open end of the jejunum[1] or by an end-to-side pancreaticojejunostomy.

The fact that so many procedures have been advocated for re-establishing gastro-intestinal, biliary, and pancreatic continuity, indicates that individual anatomic pecularities render each case an individual problem. From the physiologic viewpoint, however, a technique whereby the pancreatic duct and common bile duct are implanted proximally to the gastro-enterostomy has the advantage of keeping the pancreatic and biliary anastomoses out of contact with the stream of food, thus avoiding ascending infections.

Summary

1. Eight cases of pancreatic lithiasis are discussed. Five have been subjected to various types of pancreatolithotomy and pancreatoduodenectomy.

2. Pancreatic lithiasis is probably a result of chronic recurring pancreatitis.

3. Neither the cause nor a satisfactory treatment for chronic recurrent pancreatitis is known.

4. There is no known means of establishing a diagnosis of carcinoma of the body of the pancreas at a time when the tumor is curable.

5. Carcinoma of the head of the pancreas and lower bile ducts carries a more favorable prognosis than carcinoma of the body.

(Continued on Page 1500)

Spinal Anesthesia

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THIS PRESENTATION ON spinal anesthesia is a discussion of the particular method without trying to compare it with other types of anesthesia. Such comparisons are mainly of local interest because they depend so much upon the limited condition of a particular hospital and its staff. The following observations are based on information obtained from all that has been learned from others, plus observation during spinal anesthesia and care of the patient throughout the operation. It is my contention that care of the patient after the injection is quite as important as the introduction of the drug.

Anatomy

A brief discussion of important anatomical considerations is indicated. The neural canal through which the spinal dura and its contents pass is formed by the vertebrae. We are interested in the normal curves of the spine. The neural canal is not horizontal when the patient is in supine position even though the operating table is level. The lumbar region presents a ventral curve with sloping in both directions. In the lateral position the neural canal can be kept nearly in the horizontal plane by adjusting the table.

The tips of the lumbar transverse processes are broad in the up and down dimension, the space between them may be narrow. In some of the patients this space may be increased by flexion of the back, while in others it is rather well fixed. The depth to the dura at the second to third lumbar space is not as great in most patients as the length of the 3 to 3½ inch needles commonly used.

Sensory nerve supply levels that one should remember are: perineum—sacral nerves; legs—lumbosacral; inguinal—twelfth thoracic; umbilicus—tenth thoracic; zyphoid—seventh thoracic; nipple—fourth thoracic. The phrenic nerves arise from cervicals three, four and five.

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The spinal nerves are fixed only where they pass through the dura laterally. At this point a needle could damage them; centrally they are free to move away from a needle. Also there are fewer blood vessels in the central line of the dura than laterally. The anesthetic drug acts on the nerve roots, therefore one should know the levels at which they leave the dura. The structures which the spinal needle may contact that contain the most pain receptors are the skin and periosteum. The former can be locally anesthetized; the latter should be avoided with the needle. Careful study of a skeleton is recommended to help keep the bony landmarks in mind.

Drugs

Features common to all drugs. There are many characteristics that are common to nearly all drugs used in spinal anesthesia. Some of these may vary in degree between the drugs, but there will also be variations with different patients using the same drug.

Spinal anesthetic drugs in solution are injected into the cerebrospinal fluid of the spinal dura. The drug mixes with the fluid which surrounds the spinal nerve roots and the spinal cord. The nerve impulses are blocked primarily in the spinal nerves where they are bathed in a sufficient concentration of the drug. While the quantity of cerebrospinal fluid that will dilute the drug after it is injected is not known, most of the drugs are injected in small volume with the idea that they will be rapidly diluted. When large volumes and low dilution are injected there may be considerable displacement of cerebrospinal fluid upward with diffusion at both ends of this volume injected.

In general, the amount of circulatory depression caused by spinal anesthesia is not a characteristic of the drug used; it is more dependent upon the amount of body anesthetized and the time in which the anesthesia is produced. This time element is usually a factor of technique and not a specific property of the drug. To illustrate, a given patient will have less circulatory depression if ten minutes are required to produce anesthesia from the perineum to the nipples than if the same level of anesthesia is produced in three minutes with the same drug. There is one circumstance in which circulatory depression may be a specific action of the drug and that is in the occasional case where systemic reaction may be produced from subarachnoid injection, the same as from local infiltration. These reactions have been observed with relatively small doses and very limited area of the body anesthetized.

The solution of the drug should be distinctly heavier or lighter than the cerebrospinal fluid in order to employ the element of gravity in controlling the level of anesthesia. The importance of this difference decreases somewhat when a large volume and lower concentration are employed.

Hyperbaric drugs tend to gravitate downward. The importance of position in this gravitation diminishes after the first ten minutes and is greatest in the first three minutes after injection. Diffusion alone is not sufficient to produce high levels of anesthesia. This has been demonstrated by injecting drugs in the usual concentration at the lowest portion of the dura. However, large volumes of a more dilute drug injected in this area can produce high anesthesia as has been demonstrated with accidental intradural injections during sacro-caudal anesthesia.

Drugs that can be used in 3 to 5 per cent concentration, such as procaine, metycaine and monocaine, have a greater specific gravity than cerebrospinal fluid. If the drug is used in crystalline form and dissolved in the patient's cerebrospinal fluid the increase of specific gravity over the patient's cerebrospinal fluid will be a constant factor when the same percentage is used. In the use of drugs such as pontocaine and nupercaine, where the maximum dosage is 20 to 12 mg. instead of 200 to 150 mg., there will not be much change in the specific gravity. Nupercaine is frequently used in a prepared solution of 1:1500 which is distinctly lighter than cerebrospinal fluid. Two methods are commonly employed to make a solution heavier (hyperbaric) and can be done by the administrator at the time of injection. One is to add 50 to 100 mg. of procaine to the solution, the other is to add equal parts of 10 per cent sterile dextrose making a 5 per cent dextrose solution which has sufficient specific gravity to behave very similarly to 5 per cent procaine.

In my experience, the longer-acting drugs have been the only ones to produce permanent or prolonged nerve damage resulting in prolonged anesthesia or bladder paralysis. This may mean that the therapeutic equivalents are not correctly estimated, and if the drugs were given in exactly equivalent effective dosages, the time of action probably would be nearly the same.

The safety factor of drugs is a very difficult one

to determine. The number one factor in safety rests with the administrator of the drug, and that includes taking care of the patient throughout the operation. The safety of spinal anesthesia given by single injection becomes less when one tries to increase the time and when larger areas of the body are anesthetized. Assuming correct administration and use of the drug, the dangers shift to those of choice of patient and type of operation.

The arithmetic involved in determining the percentage to be used is not complicated, but since the quantities are in milligrams some find it confusing. Therefore it is best to memorize a few sample percentages. To produce a 5 per cent solution, each 50 mg. must be dissolved in one c. c. of fluid; hence, 100 mg. in 2 c. c., 150 mg. in 3 c. c.; whereas to produce 3 per cent solution, 50 mg. are added to 1.6 c. c. For drugs that come in solution, one needs to remember that 2 c. c. of 10 per cent solution contains 200 mg. of the drug and that the amount must be carefully measured in a syringe because the ampuls are filled to permit withdrawing 2 c. c. and do not always contain exactly that amount. This 10 per cent should be diluted in equal parts to produce 5 per cent. Furthermore this may not be the proper dosage and the extra solution should be discarded before attaching the syringe to the spinal needle. It cannot be emphasized too strongly that the amount of drug in an ampul is not always the proper or safe dose of that drug.

Procaine hydrochloride is the earliest drug used in spinal anesthesia that is in common use today. It is one of the least potent drugs used, but that also gives it an element of safety. Procaine is available in sterile ampuls in solution and crystaline form. The crystals are best for general use. It is sold under trade names such as "Novocaine" and "Neocaine," as well as procaine. When the crystals are dissolved in cerebronspinal fluid, the resulting solution is heavier than the patient's cerebrospinal fluid. It should never be used in higher than 5 per cent concentration, but may be used more dilute.

The dosage used is varied, depending on the amount of the body to be anesthetized, the duration of anesthesia desired, and the size and age of the patient. The maximum dose for a single injection has arbitrarily been suggested not to exceed 200 mg. However, others have chosen a safer maximum dose of 150 mg. With 150 mg. one rarely produces respiratory paralysis sufficient to be troublesome. Of course, respiratory arrest can result secondarily to severe circulatory depression. The duration of spinal anesthesia with procaine depends upon the condition of the patient, dosage used, and the area of the body anesthetized. One does well to provide one hour of operating time with 150 mg. for an upper abdominal laporotomy, but one and one-half to two hours can be produced for perineal surgery with the same amount. Procaine anesthesia generally terminates rather rapidly. That is, in five to ten minutes after the first return of motor control there may be complete return of sensation resulting in severe pain. This requires prompt addition of some other type of anesthesia unless the operation is nearly over when motor control and beginning return of sensation occurs. It may also require prompt use of postoperative analgesic drugs in cases where wounds are particularly painful. This rather abrupt disappearance of anesthesia is generally not a desirable characteristic. Procaine usually produces skin anesthesia four to six segments above the level of motor paralysis, which is a good feature.

Metycaine is more potent than procaine, so that one can obtain about the same results with a smaller dosage. Rarely should single doses of 150 mg. be exceeded. This drug is supplied in ampuls containing 10 per cent solution. It should never be injected without being diluted to at least 5 per cent. Cerebrospinal fluid is used to make this dilution.

Pontocaine has commonly been considered to have an equivalent potency ten times that of procaine. It has been widely used to produce more prolonged anesthesia. It is available in 1 per cent solution and in a powder form, both in ampuls. Two c. c. of 1 per cent solution contain 20 mg., an amount that should rarely be used. It should be diluted to .5 per cent or less before injection. It is not difficult to produce enough respiratory paralysis with 18 to 20 mg. to cause respiratory difficulty. One and one-half to two hours anesthesia can usually be produced with 16 mg. for an upper abdominal operation. In contrast to procaine, the complete disappearance of anesthesia rarely occurs rapidly. The return of sensation is more gradual, which allows for more time to produce anesthesia if supplement is indicated and makes for less severe postoperative pain when the operation has been completed before termination of anesthesia.

Nupercaine is the most potent of the drugs used for spinal anesthesia. It is commonly used in the 1:1500 dilution furnished in ampuls containing 20 c.c. This solution is lighter than cerebrospinal fluid, hence requires different technique of administration. It is also available in a 1:200 dilution. This concentration should not be used without dilution. Personally I do not think any dilution less than 1:1000 should be used. However, 1:400 dilutions are being used. They should not be generally employed until more proof has been furnished of the safety of such concentration.

Technique

It is not my intention to set forth a definite technique but rather to point out several things that have been useful in teaching this type of anesthesia.

The lateral position is most satisfactory for inserting the spinal needle, the body should be flexed, but the patient rarely needs to be held forcefully. If the proper position cannot be voluntarily maintained by the patient, one's technique is faulty or else the patient is a poor candidate for this type of anesthesia. The patient should be told what to expect before preparing the skin, and before palpating the back. Palpation should be done with two fingers of the left hand gently. One can feel more with gentle palpation with the fingers than poking with a thumb. The commonest error beginners make while inserting the spinal needle is that they expect the dura to be deeper than it is and they touch the posterior wall of the neural canal before withdrawing the stylet. At the second to third lumbar interspace one rarely uses all of a 3-inch needle, the average depth being about 2 inches. With a very sharp 20 to 22 gauge steel needle, one rarely feels it enter the dura. The resistance of the internal ligaments generally can be felt. Puncturing the dura centrally is highly desirable because there are fewer blood vessels there, and the nerve roots will not be damaged because they can move away from the needle; whereas laterally they are somewhat fixed where they traverse the dura. The cord may extend to the body of the first lumbar vertebra so the needle should not be inserted above the 12th dorsal spine.

The prophylactic use of a dependable vasopressor drug is generally advisable. To be effective this drug must be absorbed into the circulation in sufficient quantity to be acting before the blood pressure drops. This means it must be given ten to fifteen minutes before the spinal injection, if given subcutaneously. It is best that the anesthetist administer this drug intramuscularly laterally in the muscles of the back through the skin wheal. Given this way it will be absorbed rapidly. With the doses usually employed we have found it best to do this right after the wheal is made, before the spinal needle is inserted.

The control of the level of anesthesia is very important. A few general features should be kept in mind in order to use specific maneuvers with intelligence. The anatomical curves of the spine have been pointed out previously. These are particularly important in influencing the gravitation of the drug injected. One must know the relationship of the specific gravity of the solution injected to the cerebrospinal fluid. Gravitation is a much more important factor in the dispersion of the injected drug than diffusion. The smaller the volume injected, the more important gravitation becomes.

The larger the area of the body to be anesthetized the more drug will be required to produce the same duration of anesthesia in a given patient. Limiting the dosage injected at one time becomes a safety factor because smaller doses will become too dilute to cause extremely high level of anesthesia in the average patient. The length of the spine and volume of cerebrospinal fluid are more important in determining the proper dosage than the weight of the patient. The better the patient's circulation, the shorter will be the duration of the anesthesia. The circulatory depression will be less if the anesthesia is allowed to ascend slowly. That is, producing anesthesia to the nipple line in three minutes will cause marked blood pressure drop more frequently than producing the same level of anesthesia over eight to ten minutes. However, with the same dosage the fast method will produce a longer duration of anesthesia for an upper abdominal operation.

It is of paramount importance to check the level of anesthesia often and carefully if one wishes to learn to improve his control over the level of anesthesia. The general existing concept is that the level of anesthesia is "fixed" in ten minutes. This is not always true. The term "fixed" may be interpreted to mean that the drug has been removed from the fluid by the nerve or other tissues; it may be used in the simpler and more accurate sense, namely, that the anesthesia level will not change. Studies have been reported and are now under way that show recovery of considerable amount of pro-

caine from the cerebrospinal fluid. Also, one can often cause the anesthesia to disappear in five to ten minutes by withdrawing 15 c. c. of cerebrospinal fluid during continuous spinal anesthesia. I have observed the level of anesthesia ascend over a thirty-minute period after the injection. This is most apt to occur when a hyperbaric drug is given in sizable dosage and kept at a low level for some minutes followed by a steep Trendelenberg position, as in many other instances, the final level being limited by dilution of the drug to a point where it no longer produces anesthesia.

All the commonly used drugs except nupercaine produce anesthesia shortly after they come in contact with the spinal nerves in anesthetic concentration. Specific factors in the control of the level of anesthesia are:

1. Specific gravity of injected solution: heavier —hyperbaric; lighter—hypobaric; same—isobaric.
2. Position of patient during and after injection.
3. Rate of injection.
4. Dosage.
5. Concentration.
6. Level of injection.
7. Anatomical differences.
8. Consistency in technique employed.

1. *Specific gravity of anesthetic solution.* It has been found necessary for the solution injected to have a specific gravity either definitely greater or less than the cerebrospinal fluid in order to predict in any measure its behavior after injection. This is less important with dilute solutions and low concentrations. This difference in specific gravity makes for considerable control of the dispersion of the drug in the subarachnoid space. It also influences the diffusion factor. However, one should not use unsafe concentrations of the drug nor excessive dosage to produce this difference in specific gravity. In my experience the use of dextrose has been a safe method of producing the desired increase. A solution containing 5 per cent dextrose behaves very similarly to 5 per cent procaine solution. Some prefer still greater increases in the specific gravity such as adding of the dextrose to procaine solutions.

2. *Position of patient during and after injection.* In order to make the best use of the factor of gravitation one must use different positions of the patient. To produce only perineal anesthesia for prolonged time, fairly large doses of hyperbaric drug may be given and limited to the caudal end of the dural sac or one may wish to produce anesthesia of shorter duration with a small amount of drug. This may be done by making the injection with the patient sitting and kept sitting five minutes after injection. About the same results can be obtained in the lateral position by elevating the head of the table before the injection and keeping it elevated after the patient is turned in the supine position.

In producing spinal anesthesia for a mid-thigh amputation using a hyperbaric solution, one should place the operative side down, inject the solution very slowly and leave the patient on the side for five minutes. This will produce anesthesia in the operative side first and longest. It blocks both the motor and sensory roots on that side and causes less circulatory depression because a smaller area of the body is subjected to spinal anesthesia in the first five minutes. Also one can produce a longer duration with a given dose, or if a longer time is not needed the dosage can be reduced.

The level of anesthesia for abdominal operations reaches into more vital areas of the body. Lower abdominal operations require skin anesthesia to the zyphoid, and upper abdominal operations require skin anesthesia to the nipple line. The motor paralysis is usually a few segments below the sensory block. A hyperbaric solution injected between the second and third lumbar spinous processes gravitates into the dorsal region with the patient lying in the supine position even with the operating table level. The patient should be turned on his back immediately after the injection is made. At three minutes after the injection the anesthesia level is checked. If it is progressing upwards and is at the umbilicus at three minutes, it will go high enough for a lower abdominal procedure without lowering the head of the table. In most patients it will also go high enough for an upper abdominal operation. However, a check at four minutes is made to make sure of the rate it is ascending. Changing the level of the table at three minutes will still influence the rate and the level to which the anesthesia ascends. To be sure, it is more effective in the first three minutes, but it should not be used unless one's technique definitely requires such early change. Putting the head of the table down right after the injection produces high anesthesia rapidly and also a maximum incidence of marked drop in blood pressure.

3. *Rate of injection.* A rapid injection generally makes the anesthesia level ascend quicker than a slow injection of the same amount. A very slow injection may be desirable when only unilateral anesthesia is necessary. One may choose to make considerable use of the variable in the control of the level, but in general it is a factor that can be kept fairly constant.

4. *Dosage.* The dosage of any single injection is limited because of the danger of respiratory paralysis. Small doses may be used to produce perineal anesthesia provided the drug is given so that it will gravitate into the caudal end of the dura without being dispersed throughout all the spinal cerebrospinal fluid. Dosage, when kept in the safe range, is more a factor controlling the time of anesthesia than the level.

5. *Concentration and dosage really are inseparable.* One should use only safe concentrations. This also determines the volume of fluid injected. It is best to keep concentration constant; this will vary the volume with the dosage. There is no objection to the use of low concentrations and large volume if one is familiar with the proper technique of its use.

6. *Level of injection.* This is of importance in relation to the lumbar curve. The solution may be deposited so that most of it gravitates caudad when one wants anesthesia for the upper abdomen. Therefore the needle should not be inserted below the lumbar second to third interspace for other than perineal operations.

7. *Anatomical differences.* Increased lumbar lordosis will increase the amount of gravitation with the table level. In this case one can reduce the dosage to limit the level of anesthesia. Putting the patient in the lithotomy position immediately after the spinal injection reduces the amount of the lumbar curve in some patients, and one may have to take steps to compensate for this change if his technique depends upon that curve for gravitation.

8. *Consistency in technique* is particularly important. Keep as many factors constant as possible. Check the anesthesia level until it has stabilized, remembering that this may be twenty to thirty minutes.

Conduct of Spinal Anesthesia

General consideration. Many patients object to spinal anesthesia. If this objection is very strong, it is seldom wise to try to persuade the patient to have that type. If the objection is that the patient does not want to be conscious during the operation, supplementary anesthesia can be used. Many times the patient has no good basis for this objection and is converted and satisfied afterwards. Many patients are poor mental subjects for this type of anesthesia.

Pre-anesthetic sedation should consist of a good analgesic drug such as morphine and a good psychic depressant such as a barbiturate or scopolomine.

It is a mistake to tell the patient that he will not feel a thing during the operation. Some do not, but many get some type of sensation. Try to maintain the patient's co-operation and good graces during the induction of the anesthesia. It is important to get his arms as comfortable as possible before the operation starts.

The anesthesia level should be checked three minutes after the injection of the anesthesia. Then one can estimate any need for change of position. It must be checked before the incision is made. For one's information it should be determined every five minutes until there has been no change for ten minutes. The level may change up to thirty minutes after injection, but usually does not change after ten to fifteen minutes.

Put yourself in the patient's place; if not too confident, he may be just awaiting some horrible pain, so the first thing he feels may be interpreted as pain. The sense of pressure or touch is sometimes retained after pain sensation is lost. Also, transfer of sensation can occur. Manipulation of viscera frequently causes referred pain in the chest. Generally, reassurance of the patient that it will be of short duration or that it is not his heart failing, will take care of the matter. Frequently, warning him ahead of time that he may have such a sensation is good insurance; he is then in a frame of mind to give proper interpretation to the discomfort rather than become frightened that something has gone wrong.

Everyone has a different method of caring for the whims of patients. I don't mind scratching their noses, but I do not like to give them water to drink only to get it back later as vomitus.

Factors influencing the safety of spinal anesthesia:

1. Choice of patient to whom it is given.
2. Skill and experience of administrator.
3. Care of the patient during the operation.

There is a very limited value of making a list of indications and contra-indications. The decision had best be made for the individual patient. However, the demand on the part of the surgeon is often so persistent that some limits have to be maintained. The three factors listed above work together. The better the second two are carried out, the wider the range that can be given to the first. Of prime consideration, of course, is the area of the body that must be anesthetized. Anesthesia to the zyphoid or nipple line is apt to produce much more circulatory disturbance than when limited to the perineum or one leg. For spinal anesthesia above the inguinal ligament, the following conditions are particularly apt to cause trouble:

1. Severe anemia, 50 per cent hemoglobin or less.
2. Severe loss of blood before spinal anesthesia that has not been replaced.
3. Shock, or a patient recently recovered from shock caused by hemorrhage or intra-abdominal pathologic condition.
4. Extremely high blood pressure, particularly in patients with a high diastolic pressure.
5. Patients with skin infection of the back.
6. Unstable or immature mental state.
7. Pneumothorax, hemothorax from trauma, or other acute causes of loss of large area of functioning lung tissue.

There are many other factors which one may consider as ruling out the use of spinal anesthesia. They are of local and personal importance, but may not all apply generally.

The general care of the patient during operation has been discussed, but of more importance is the watching and care of the circulation, and level of anesthesia. The spinal anesthesia may cause some drop in blood pressure, even though a vasopressor drug has been given. Also, if the operation is in the peritoneal cavity, the manipulation will add to the drop in pressure. Both causes usually have their maximum effect at the same time. Generally, the surgical manipulation is not prolonged, but if so, it may need to be delayed to allow recovery of the pressure. The use of solution such as 5 per cent glucose to help prevent blood pressure drop is very helpful, that is, if they are started before or immediately after the spinal injection. They may not be effective in restoring the pressure once it has dropped. Blood or plasma is more efficient. If vasopressor drugs are to be used after the pressure is low, they should be given intravenously in small doses. If there has been considerable blood loss during the operation, the drop may well be due to this, and blood should be given and the vasopressor drugs used with care or not at all.

The first question arises at what pressure level must treatment be instigated? This is a biological problem, and there is no value that can be set for all patients. We start the prophylactic treatment before the spinal is given, then determine by the patient's condition what is indicated. Partial respiratory paralysis can usually be treated by administering oxygen. More extensive respiratory paralysis must be treated promptly by inflating the patient's lungs with oxygen. This can be done adequately with intermittent manual pressure on the breathing bag of an anesthetic machine.

Signs and symptoms of physiological disturbance from low blood pressure:

1. Nausea (may also be a reflex with good blood pressure).
2. Pallor.
3. Sweating.
4. Dizziness, stupor, unconsciousness.

Treatment aimed at immediate trouble and to overcome circulatory depression:

1. O_2 inhalations—inflation if there is respiratory paralysis or arrest from an anoxic respiratory center.
2. Intravenous fluids and blood.
3. Vasopressor drugs.
4. Sometimes head can be lowered.
5. Depression must not progress too far before treatment is started. Too often one hears the statement that anyone can watch the patient that has spinal anesthesia. The changes generally occur gradually, and by close observation treatment can be instigated in time to prevent serious consequences. This the anesthesiologist can do without troubling the surgeon, who may already have problems of his own and should not be distrubed to take care of the anesthesia also.

The most feared part of having spinal anesthesia by the patient is that the anesthesia will not last long enough. The anesthetist has this in mind before he starts, but in case he has misjudged the time, he must be prepared to administer promptly anesthesia of some type before the patient has severe pain. It is important that the patient is satisfied.

Supplementation may be necessary in upper abdominal surgery because of pain and discomfort caused by traction on the viscera. Remember how helpless a patient must feel, half paralyzed, and the other half strapped to the table, if you refuse to do anything when he says he is having pain. Any surgeon or anesthetist who must have an operation below the diaphragm should have spinal anesthesia, particularly those who make such outstanding claims for this method to their patients.

Summary

Spinal anesthesia requires as much skill and experience to administer properly as any other type of anesthesia. The care of the patient after the initial injection is just as important as during general anesthesia for the greatest safety and success of the method. Only the anesthesiologist has enough training and experience to use all the drugs and methods of this type of anesthesia. Others had best stick to one or two drugs that they have learned to use safely. Marked abnormalities in any of the three systems, respiration, circulation or central nervous system, usually make the use of this type of anesthesia inadvisable.

The length of the spine and the cerebrospinal fluid volume are more important in determining the dosage than the body weight. The rapid ascent of anesthesia level is more apt to produce a marked drop in blood pressure than producing the same level over a longer time. The circulatory depression is not caused by a specific drug but is related to the total area of the body anesthetized, plus the time over which this anesthesia is produced. In controlling the level of anesthesia, the gravitation factor is much more important than diffusion.

The safety and success of spinal anesthesia, as in all other types of anesthesia, depends upon the skill and experience of the administrator. Also, like other types of anesthesia, administration includes constant caring for the patient throughout the operation.

The Cerebral Palsy Problem

By Charles H. Frantz, M.D.
Grand Rapids, Michigan

UNTIL COMPARATIVELY recent years, spastic paralysis was considered a condition affecting chiefly the feeble-minded child. The designation "spastic" was more or less a general term under which other allied disorders were conveniently classified. There has been, of late, a gradually increasing interest in this type of affliction. Business men's clubs, benevolent groups and parent organizations are manifesting a desire to see the "spastic" child receive his due consideration.

Through the channels of educational programs, surveys and research, more light has been shed upon these children with neuromuscular disorders. The layman is becoming familiar with, and is appreciating more, the problems besetting this type of affliction. Our increasing familiarity with these cases has shown us that the true spastic comprises less than one-half of the total cerebral palsies in children.

Under the term infantile cerebral palsies we must classify spasticity (40 per cent), athetosis (40 per cent), and ataxias (20 per cent).

Statistical surveys have shown that cerebral palsy is almost as frequent as anterior poliomyelitis. Of great importance is the birth rate and incidence. There are seven of these children born per 100,000 population per year. Of this group of seven children, one will die before reaching the age of six years, and two will be feeble-minded, leaving four treatable cases. Thus, a community of 100,000 people will have between 50 and 60 of these children under 16 years of age. Some, of course, will be mild and others severe. The statistics in general show 27 per cent to be severe, 44 per cent moderate, and 28 per cent mild.

In urban areas where the public school system offers a special room or division for handicapped children, the mild case and some moderately involved will obtain special care and training during the school years. However, the severe type of case and the majority of the moderately involved, in both urban and rural areas, have no recourse to either schooling or treatment. At the present time there are inadequate facilities to handle cerebral palsied children.

The prevalence of this group among crippled children is demonstrated by the figures from the Orthopaedic Clinic at Blodgett Memorial Hospital in Grand Rapids. From January, 1935, to January 1, 1945, 130 new cases were examined. The distribution and ages were recorded as follows:

Age at admission	Pre-school	(1 to 5 years)	68	52.3%
	School age	(6 to 18 years)	57	43.8%
	High school	(over 18 years)	5	3.9%
Distribution in 23 counties	Rural		60	46.1%
	Urban		70	53.9%

The rate of admission per year was fairly constant:

1935	1936	1937	1938	1939	1940	1941	1942	1943	1944
15	13	13	20	18	17	10	8	10	10

An attempt at a fluid analysis of schooling over a ten-year period was attempted and produced the following:

	Schooling	
Feeble-minded	20*	
In Public School	26	15.3%
Began in Public School	18	
Began in Ortho. School	8	
Have had, or having, Ortho. School	51	
Have had advantage, Convalescent Home	25	

In ten years, seventy-five patients have had advantage of schooling.

*Of these, nine were in institutions.

Up to January, 1946, only seven of these patients had been discharged from further care. A total of thirty-two cases have been lost to the unknown file, having failed to return in a five-year period.

The constant rate of cerebral palsy in the handicapped section of the public school system in Grand Rapids is revealed by the graph (Fig. 1). Of the total enrollment, infantile cerebral palsy has accounted for between 11.1 per cent and 19.6 per cent over an eleven-year period. It is interesting to note that contrary to the constant rate of this group of neuromuscular disorders, the incidence of infectious diseases of bone steadily decreases. The advent of chemotherapy has had much to do with the slow decline of those crippling diseases due to infection. The crippled children problem is constantly changing. We see less and less bone and joint tuberculosis. The incidence of rickets is decreasing. Although the incidence of anterior poliomyelitis continues about the same as in past years, this disease may in the future follow the other diseases of an infectious nature in a decline. Our gradually increasing knowledge of the virus makes us hopeful.

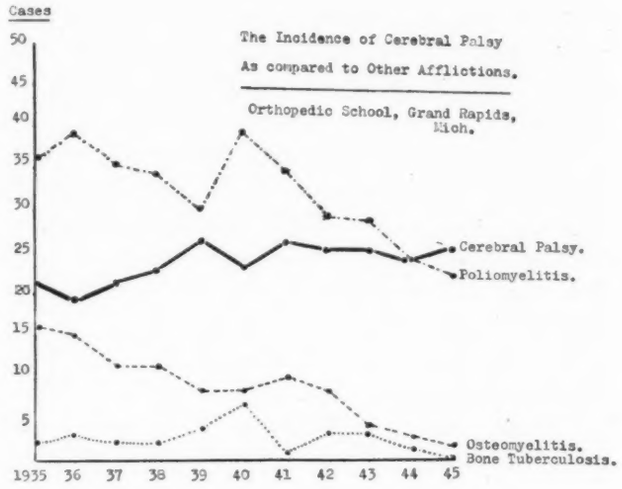


Fig. 1

The recently manifested interest in cerebral palsy occurring almost coincidentally with the decline of infectious diseases may well infer that this group will take its place alongside residual poliomyelitis, polyarthritis, cardiacs, traumatic lesions, and anomalies as far as care and rehabilitation are concerned.

A mild hemiplegic may well hold his own in the classroom with normal children. So probably may a mono-athetoid. These mild and borderline moderate cases are acceptable in the handicapped rooms of the public school. The severe and moderate, however, who by virtue of their motor dysfunctions are not acceptable in the system, are candidates for a special training program.

Most of us are born with a normal neuromuscular mechanism, a "high school physical education." We do not have to be taught a course in basic physical co-ordination. Contrarily, none of us are born with a high school mental education and think nothing of spending twelve years on our mental education; many of us devote considerably more. We might, however, balk at having to spend twelve years or more on our physical education along with mental development. The cerebral palsied individual is not born with a high school physical education and should be willing to spend a long time on it. We know that individuals do not learn skills ahead of the years they normally develop. There is no rushing or shortening the period necessary to develop the basic skills in normal

individuals; neither, then, should such be expected in the development of the spastic or athetoid child.

The mental status of these children should be determined as accurately as possible. Probably one-quarter of them are borderline or feeble-minded. We expect mental deficiency to be more prevalent in spastics as the lesions are cortical. It is sometimes difficult to distinguish actual mental impairment from retardation which is the result of the handicap (limited experience for the given age). The Stanford-Binet test may be given. If it is low, one should endeavor to determine why it is low. One evaluation is unsatisfactory and unfair in the more moderately and severely involved. Subjecting a child to an examination based on motor response and time elements is taxing. The child should be given the benefit of the doubt.

Some 15 per cent have hearing defects, and although acuteness of hearing may be normal, pitch cut-off occurs. Below certain levels, all vowels sound alike. It may be impossible for the child to catch the difference between "T's" and "S's." Difficulty with diaphragm, larynx and tongue may be present. An examiner not acquainted with the nature of these handicaps might classify the child as mentally lowgrade; whereas, the responses of a fairly quick brain may be laboring to form painfully slow and difficult words.

Visual handicaps may be present despite 20/20 acuity. Convergence may be impossible and a child may not be able to move the eyes from side to side or up and down in a co-ordinated fashion. Reading across a page or adding a column of figures would be very slow or even a failure. Some ataxics become dizzy attempting to read.

In the presence of some of these handicaps of the motor system, rendering routine intelligence quotient estimation unsatisfactory, an observation or probationary period of three months will tell much. The "learnability" of the child can be evaluated, and one will determine whether or not the candidate is capable of schooling.

Individuals working with cerebral palsy for any length of time have come to realize that these children are a "different kind of person." Their problem is one of vocational guidance and personality development as well as correction of deformities, braces, and physiotherapeutics. Each day's work includes the combating of introversion and antisocial tendencies. It is realized by the physiotherapist and occupational therapist, by the teacher in charge of mental development, and by the specialists in sight and speech, that all concerned must have an understanding of the nature of the affliction and its bizarre manifestations.

At the present time the management of cerebral palsy seems to have fallen to the orthopedist. This is probably due to the fact that locomotion and the function of the upper extremities are impaired. In spastics, contractures occur and peripheral surgery may be indicated. Also, braces and multiple corrective devices are employed, such apparatus being a part of the orthopedist's field of endeavor. Few doctors go further than supervise braces, correct deformities, and consult at regular intervals. Despite the fact that these activities and procedures go only part way in answering the over-all problem, if the orthopedist or any other physician or surgeon were to confine himself to cerebral palsy with all its demands, he would soon become a specialist within a specialty and not be a neurologist, pediatrician, psychiatrist, or orthopedist. Up to the present time, very few doctors have manifested the desire or interest to confine themselves to this single group of afflictions. In all probability very few ever will do so. The cerebral palsied child, even though he is a special entity, presents motor, sensory and emotional problems in a number of specialties and is, therefore, not the charge of any one professional individual if his rehabilitation is to be successful.

The long road of training and conditioning is the responsibility of a professional team. With the present organization of clinics throughout the state, it should not be difficult to designate the social service worker, the pediatrician, neurologist, psychologist, and orthopedist to examine and evaluate a child for rehabilitation and schooling. This phase, as a matter of fact, may be said to be existent. However, the moderate and severe cases after evaluation have no place to obtain their due. We do not have sufficient institutions to handle them properly.

It would be unwise to place these children in general convalescent homes or hospital schools with other types of crippled children. Specially designated centers properly equipped with the necessary apparatus and qualified personnel would do much to improve the lot of spastic, athetoid and ataxic children. One accepts without a second thought the presence of institutions for epilepsy, the blind, and mentally deficient.

Centers for the rehabilitation of cerebral palsy should not be homes or institutions for unlimited

care. A definite goal should be sought for every case admitted. Turnover of cases should be mandatory and no custodial case should be admitted because the space is available. A two- or three-year maximum program divided into school semesters would offer training along with schooling. Summer sessions for the less severe cases might be offered to aid them further when they return to orthopedic schools for the fiscal terms.

Obviously, the mentally deficient should not be candidates. Neither should progressive types of involvement such as certain forms of encephalitis, severe dystonia musculorum deformans, et cetera. A screen clinic diagnosing and evaluating a child would insure proper selection of children.

The goal of a treatment center should not necessarily be to turn out normal individuals. This would be impossible. It is, however, perfectly logical to endeavor to bring a helpless person to the level of a self-help by training of the hands and arms, to develop speech, and to free him as much as possible from the care of another. Many wheelchair-bound individuals do fairly well in this world. It should be possible with the proper selection of candidates to pass them initially through an environment as perfectly adapted to them as possible, followed by successive stages of progress towards a normal environment, ending the program with those children better able to cope with the world.

A program based on common sense and not striving to accomplish the impossible will ask of itself before embarking with the child: What will be accomplished in the long run? How will this child be better? In what way will he be better? Well-trained personnel acquainted with the multiple aspects of cerebral palsy will not fuss with the hopeless aspects; they will endeavor to co-ordinate the child, develop basic skills, improve speech and locomotion, endeavoring to bring a badly handicapped individual to the level of self-help in dressing, eating, talking, and toilet.

It behooves those of us in the profession who are interested in, or who come in contact with this group of children, to analyze the problems and be able to answer the multitude of questions that may be directed our way. The organizations manifesting interest should be guided and directed towards a unified program with a definite goal. They should be made familiar with the already existing facilities and not go uninformed along their own

(Continued on Page 1546)

Adhesive Strapping For Low Back Pain

By Howard J. Schaubel, M.D.
Grand Rapids, Michigan

THE PURPOSE OF this paper is to describe an adhesive support supplemented with tongue blade splints, for the treatment of low back pain and low back injuries which require temporary immobilization.

Much has been written concerning low back pain and its surgical treatment. However, before surgery is carried out in any of the pathologic conditions amenable to operation, it is often well to immobilize the low back in an attempt to prognosticate the long range postoperative result. The usual corset is sometimes not readily attainable; in such cases, other means of immobilization are used until the canvas support can be fitted. There are many painful low backs that show nothing abnormal by x-ray; some of these are acute, others are chronic in nature. A temporary low back support, together with manipulation and procaine infiltration of a trigger spot, will often relieve the pain and discomfort as well as reduce the concomitant spasm of the paravertebral muscles. It is this latter category especially that requires a firm

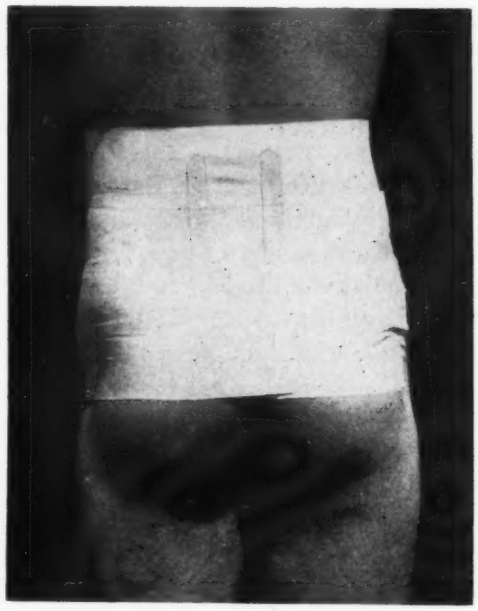


Fig. 1. Back strapped. Two tongue blades incorporated in the tape.

adhesive strapping, together with the usual conservative regime of physical therapy and a hard bed.

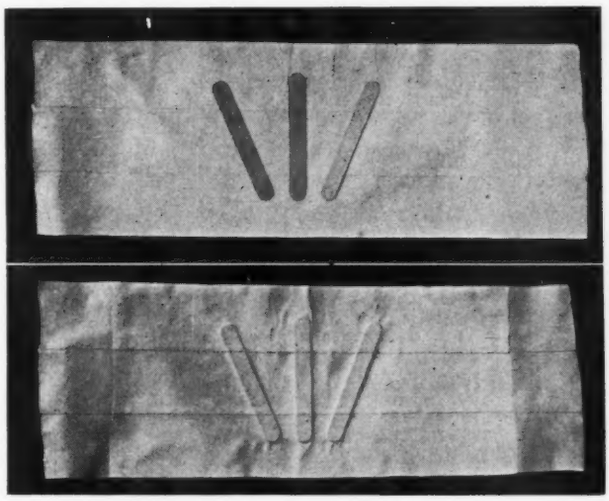


Fig. 2. (*above*) Three 4-inch width, adhesive strips, adherent side up, with tongue blades stuck to the center.

Fig. 3. (*below*) Tongue blades held firmly by three additional tapes, adherent side down. Three inches of exposed adherent tape are left at either end to allow fixation to each side of the initial strapping of Fig. 1.

Method

The lumbosacral region is painted with compound tincture of benzoin or one of the proprietory adherents. The lumbosacral area is then strapped in the usual manner with the patient either standing erect or lying prone. A moderate amount of skin tension should be obtained, and 3- or 4-inch width, adhesive strapping should be used. If firm support is needed, two or more tongue blades can be strapped into the tape as shown in figure one. It is the practice of the author to use an abundant amount of adhesive for this preliminary strapping; the area of pain plus 5 inches above and below should be strapped. Three 4-inch widths of adhesive strapping are then cut long enough to reach around the front of the body and overlap both sides of the back strapping by 3 inches. One of these strips is then laid on a flat table, adhesive side up; the next strip is then set parallel with the first, adherent side up and overlapping the first strip about ½ inch. The third strip is laid similarly to become adherent to the second. Three tongue blades are then stuck to the center of the composite tape, as illustrated in Fig. 2. Three more strips of 4-inch adhesive are next fitted, adherent side down, over the tongue blades, as illustrated in Fig. 3. The latter strips are about 6 inches shorter than the initial strips, allowing 3 inches of adherent tape still exposed on each side. The patient is then requested to roll over on his back or face the physician, depending on whether he is standing up or lying down. (Small felt pads are placed over the anterior superior iliac spines if the patient is very thin.) As the patient pulls in his abdomen while taking a deep breath, one end of the tape strip reinforced with tongue blades is applied to an anterior tab of the back strapping on one side, pulled firmly around the abdomen as in Fig. 4, and stuck to the anterior tab on the other side. The patient then assumes normal posture. Two or three anchoring strips of tape can then be applied over the region where the anterior and posterior tapes join. This allows a firm support to the back, relatively comfortable to the patient (Fig. 5). If the support becomes loose in a few days, it can be tightened by removing the anchoring strips, loosening one side of the anterior band, and with the patient again pulling in his abdomen, the anterior band can be replaced farther back and again anchored.

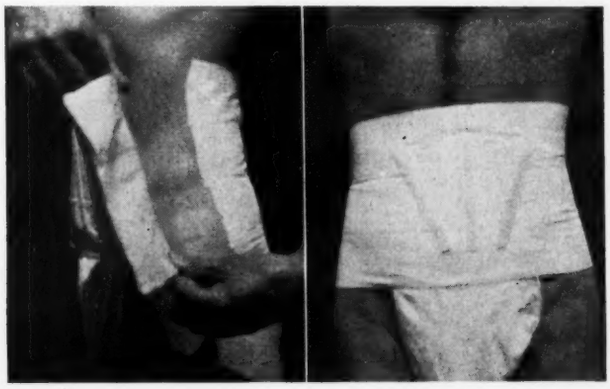


Fig. 4. (*left*) Composite anterior strip fastened to the right side of body, pulled firmly around the abdomen, and about to be anchored on the left anterior section of the back strapping.

Fig. 5. (*right*) Anterior view of the completed strapping.

MSMS

CARCINOMA OF THE RECTUM

(Continued from Page 1478)

of malignant lesions and having proved its worth in results obtained through the years.

It is obvious that there should not be only one method for the proper surgical treatment of lesions in these regions. There should be many and there are many. It is imperative for the surgeon to be familiar with all of them in order that the selection may be individualized for the patient.

Editorial

NATIONAL HEALTH LEGISLATION DEMANDS

DEMANDS ARE MORE forceful than ever that some sort of national health legislation be enacted within the near future. It has been announced in the press* that Michigan is to be a trial field for little Wagner-Murray-Dingell Bills. One was introduced just before the last legislature adjourned, and this time it will be coming forth earlier to have a chance to be considered. Two years ago such a bill barely missed passage in California.

We have read this past few months of the hearings being held in the Committee on Labor and Education of the United States Senate, with carefully selected witnesses and garbled reports seeming to show a mass of evidence for the bills. That same technique can be invoked again. Those opposed to the bill were limited in numbers, but apparently anyone in favor got a hearing even if he represented a rather small group.

Major General Paul R. Hawley, medical director of the Veterans Administration, in an address to students of George Washington Medical School said:

> "It is a fact that can no longer be denied nor evaded that medical care has become so expensive as to place it in the class of luxuries . . .
>
> "I am amazed to find how few (physicians) realize just how close we are to some form of socializing of medicine. They have been drugged into believing that bills before the Congress are merely the ideas of crackpots which have no chance of ever becoming law. Nothing could be farther from the truth. Just as sure as we are here together today, if medicine does not offer a workable solution to this real problem, some plan will be forced upon the medical profession." (General Hawley suggests socializing of diagnostic and laboratory services, the most expensive item in medical care, and adoption of more businesslike methods.) "The lowering of costs of medical care need not be made at the expense of the profession. But lower them we must, else we are all going to be working for the government within a very short period."

Senator Taft, in a speech before the Wayne County Medical Society (see page 1418), said the profession must offer something that will fill the requirements of those who wish national health legislation, and that does not include the social workers, the do-gooders, or the bureaucrats who wish to remain secure in well paid jobs. What it does mean is that there is an ever-increasing mass of the whole people who are clammering for medical and health "security." They want to have their health bills guaranteed in advance, and most of them at present want that at the expense of someone else—the government or their employer, and the doctor.

The United Mine Workers Union secured a health fund as a part of their strike settlement. Other unions are now at their conventions discussing the subject and determining that such a fund will necessarily be part of their future terms, and will not be considered as an increase in wages. The AMA in convention at San Francisco adopted a resolution instructing their councils and committees to offer aid and advice to the labor unions in working out the details of their new plans for health funds.

*Time, October 14, 1946, page 51.

RUGGED INDIVIDUALS

ALL OF THESE INCREASING plans for taking cognizance of the national health are in a measure a retrograde movement in the life of this great republic. When we were growing from spindling beginnings to the estate of a great nation, we did it by the combined efforts of men and women who took care of themselves. The only odds they asked of anyone was that they be given a chance to work and grow and build. When a new want came into their lives and they had to provide it, they either invented and built it or worked much harder and bought it.

But the modern trend seems to be entirely away from this self-sufficiency. It seems to be the natural thing now to look for someone to supply our needs without too much effort on our own part. So far as medical politics and medical or health legislation is concerned, that attitude is just what the long-haired enthusiasts, the do-gooders want. If we can be lulled into thinking all is well, they can more easily carry out their plans, and when we are finally aroused or awakened, we shall wonder what has happened, and why George did not tell us what was going on.

These individuals are not sleeping while we are letting affairs take their own course. They see in our indifference and the public's need, a chance to increase their power. Many of them are already entrenched in well-paying positions with the government and in places of untold power over the well-being of the masses. The power to dole out health services, and other social security benefits is the power to control the lives of all the people. It leads in very short steps to national socialism. It has done that in other places. Food, clothing and housing are also necessary to the health of the people, and they must necessarily be guaranteed to the masses, too, when their individualism has been sapped some more.

THE EIGHTY-FIRST ANNUAL SESSION

THE EIGHTY-FIRST ANNUAL session of the Michigan State Medical Society is history. It saw the largest registration in our history. The total registration was 2,833, of which 2,165 were doctors of medicine. The halls of the hotel, the exhibits and the convention rooms were crowded. Only one of the speakers failed to appear, and he was confined to his bed but sent his paper on.

As ever the exhibits were well arranged, displayed to advantage, and were visited by the interested members. Several of the exhibitors told the writer how much they liked to come to the Michigan meeting. They consider it as important as many national conventions.

The work of the Society is being checked and directed by the House of Delegates, and important decisions are being carefully studied before being passed. Recognizing the importance of public relations, the Society adopted a far-reaching and extensive program, involving another assessment of $25 on each member to be paid as part of their dues.

The General Assembly, at the time of the president's night, heard an inspiring speech by Mr. C. F. Kettering, vice president of General Motors. This was the annual Biddle Oration.

ELECTIONS

President-elect P. L. Ledwidge, M.D.

DOCTOR LEDWIDGE HAS BEEN advanced to the presidency of the Michigan State Medical Society as the result of untiring devotion, days upon days of time, and constant effort to give to the society the very best administrative ability that can be given. Dr. Ledwidge graduated from Wayne University College of Medicine in 1920, interned at Harper Hospital one year, was resident in Children's Hospital three months, then at Harper Hospital for a year. He has been in the private practice of internal medicine since 1922. His first three years were in association with the late E. W. Haass, M.D., chief of the department of medicine at Harper Hospital.

Dr. Ledwidge has been Fellow of the American College of Physicians since 1926, and acting governor for Michigan, 1942-45. He has been a Diplomate of the American Board of Internal Medicine since 1937. He is assistant professor of clinical medicine at Wayne University College of Medicine, attending physician to Harper Hospital, associate physician to Mount Carmel Mercy Hospital, member and past president of the Detroit Medical Club, and member of the Detroit Academy of Medicine.

Dr. Ledwidge is secretary of the Board of Directors of Michigan Medical Service, and has been speaker of the House of Delegates of the Michigan State Medical Society for the past five years. As such he has been a member of the Council of the Michigan State Medical Society, and of the Executive Committee. In these offices of the Medical Service and of the State Medical Society, his services have always been freely given and his counsel and advice have been invaluable. We are proud to have him as our president-elect.

Councilors

1st District. C. E. Umphrey, M.D., Detroit, was re-elected.

4th District. R. J. Hubbell, M.D., Kalamazoo, was re-elected.

5th District. J. Duane Miller, M.D., appointed to fill the vacancy caused by the resignation of A. B. Smith, M.D., Grand Rapids, was elected.

J. Duane Miller, M.D., was graduated from the University of Michigan in 1924, with B. S. and M.D. degrees. He was a teaching assistant from 1921 to 1924. He interned at Blodgett Memorial Hospital, Grand Rapids, for a year, after which he practiced with Dr. Alexander M. Campbell until 1939. He attended the University of Vienna 1930-31. He was on active duty in the U.S. Navy during World War II, at the U.S. Naval Hospital, Mare Island, California, in 1942; at the U.S. Naval Base, Solomon Islands, in 1943; with the amphibious forces during the assault on Peleliu Islands in 1944;

and at the U.S. Naval Hospital at Corvallis, Oregon, in charge of bone and joint surgery in 1945. He was released to inactive duty in February, 1946, with the rank of commander.

Dr. Miller has been secretary and chairman of the Section on Obstetrics and Gynecology of the Michigan State Medical Society, chairman of the Press Relations Committee of the MSMS, chairman of the Radio Committee, chairman of the Committee on Industrial Health, 1941-42, and secretary of the Michigan Association of Industrial Physicians and Surgeons for many years. He is consultant in surgery and chairman of the department of surgery of Blodgett Memorial Hospital, and president-elect of the Michigan Association of Industrial Physicians and Surgeons.

6th District. R. C. Pochert, M.D., Owosso, was re-elected.

Speaker of the House of Delegates

John S. DeTar, M.D., Milan.

Dr. DeTar received his literary degree from the University of Michigan in 1924. He graduated from Wayne University, M.D., in 1930, and interned at Henry Ford Hospital. He has practiced in Milan, Washtenaw County since 1931 to the present time. He was president of the Washtenaw County Medical Society 1940-41. He has been chairman of the Public Relations Committee of the Michigan State Medical Society, 1943-44, and 1945 to date. He served as vice speaker of the House of Delegates, 1944-45. In civil life Dr. DeTar is president of the Library Board, president of the Community Council and chairman of the Washtenaw County Citizens Committee for a County Health Department.

Vice Speaker

R. H. Baker, M.D., Pontiac, a former member of the Council of the Michigan State Medical Society.

WE HAVE A PLAN

WE HAVE SAID THAT before and are repeating it. The Taft Health Bill meets the wishes of those of us who would like to give to the public all the national health program that they can reasonably want, and all that they should be willing even to accept. The Taft Health Bill does several very definite things: 1. It provides a health department in the government, with a doctor of medicine in the President's Cabinet, and assigns to that department all the health function bureaus and departments of the government. 2. It provides for five years' general medical research, by grants-in-aid. 3. It provides general medical service for families of low income. This is done at the state level where it should be, and does not institute any new means test. There will be Federal aid but state administration. The bill recognizes the voluntary non-profit and other funds rendering health service to those who wish to provide for themselves on a prepaid basis, and provides that the states may use such voluntary or non-profit plans to furnish health services to these low income families by paying in whole or part for the premiums. 4. It provides for dental health services for school children and families and individuals of low income, again on the state level. 5. Further research is provided: dental research, neurosychiatric research, new construction for research.

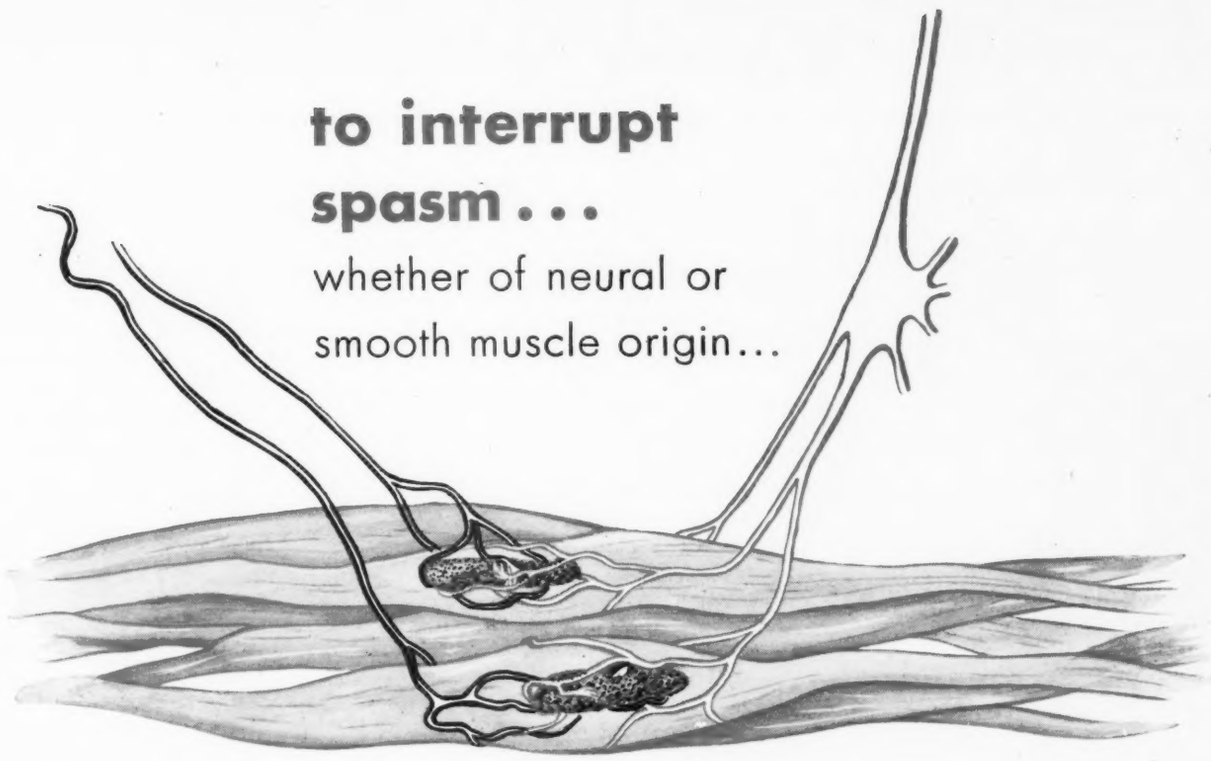
This bill is notable in that it does not provide for the Federal or other government to enter into the relation between the patient and his doctor. The present relation is not disturbed. Provision is even made for the doctor to be paid for state wards the same as he is for other patients who have had the forethought to purchase their services as prepaid services. This makes the state ward a private-pay patient the same as any other. His health services will, if the state chooses, be a part of the increasing numbers now being cared for by voluntary plans.

Another interesting feature in the bill is a provision allowing any branch of the Federal government to make payroll deductions for those employes who so wish. That is not now possible.

The Taft Health Bill is in process of improvement, and suggestions from the practitioners who will live under its provisions are in order. Mr. Taft and his associates wish to pass the very best bill it is possible to produce. When it is done it will represent the combine efforts of the committees of the organized medical profession.

PRIVATE PRACTICE—BRITISH NEW UNIVERSAL HEALTH MEASURE

The right of private practice is conceded but the Minister will control the use of private wards in hospitals and have powers to acquire compulsorily any private nursing institution, and in these and other ways may lessen or remove the facilities for private practice.—*British Medical Journal,* October 19, 1946.



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Especially useful in the management of gastrointestinal spastic states, dysmenorrhea, urinary tract spasticity and related conditions.

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SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

Woman's Auxiliary

SERENITY, COURAGE, WISDOM

In accepting this office, I am fully aware of the responsibilities it brings, but of this I have no fear, knowing that by my side are 1,200 of the most intelligent and humanitarian-minded women in the State of Michigan. I feel a responsibility not only to my organization but, to an even greater degree, to the Michigan State Medical Society, to which we are an auxiliary. Our name implies an assistant, or one who gives aid. If we are to act as an assistant it is of utmost importance to understand the purpose and problems of our parent organization. Dr. Harrison H. Shoulders, president of the AMA, in speaking to the Women's Auxiliary in San Francisco, closed his address with this thought: Our purpose is the health, welfare, and progress of the American people under freedom.

MRS. RETLA ALTER

Let us first consider the health of our nation. There are those who seem unaware of the progress of medical science in the past years. There is no country in the world which has equalled our own in effective control of typhoid, diphtheria, smallpox, leprosy, and tuberculosis. Life expectancy in 150 years has increased from thirty-five to sixty-two years. Yet, the statistics of physical rejections for military service, released by Selective Service, have been quoted as a criticism of efficiency of medical care in this country. However, in spite of higher physical standards for military service demanded of the youth of this country, there was a lower percentage of rejections than any other country participating in World War II. Let your community know that the medical profession is proud of the consistent progress made through the years, in the development of the healthiest nation of the world. We should feel proud to act as an auxiliary to a profession which has attained such superlative success. Let your community know that we are organized for the purpose of improving the health and welfare of our people. Lend your support to such movements as Cancer Control, TB Radio Project, Rheumatic Fever Control, and denounce the socialistic programs depriving the people of voluntary health care. Great things have been accomplished but far greater tasks lie before us. Their accomplishment depends on the wisdom of the profession and the intelligence and co-operation of the people, and it remains for all of us, who have the welfare of the race at heart, to plan wisely and carry forward courageously the campaign against ignorance and disease.

Next may we consider welfare. The concept of public welfare has greatly changed in the past few years. There is not a law on our statute books that does not end with the expression "the public welfare requiring it." Welfare, to vast numbers of our people, means a monthly check from some government agency. As Dr. Shoulders stated, our leaders in human charity seem to be those who give that which they get from somewhere else, whereas welfare, as we pursue the thought, is freedom. Since VE Day, 20,000 have been added to the government payroll. When the percentage of government employes becomes large enough, our freedom will be gone. The government employes become regimented into a political unit where they seem to grow and expand, and each one has a propaganda department, financed by the taxpayer.

Now as to some of the problems. Dr. Roger I. Lee, past president of the AMA, noted that the greatest change of the war years had been brought about in the relationship of our government to ourselves. We have seen and will see the government take an increasing interest in our affairs, both personal and professional. There has recently been some very good legislation passed, in the Hill-Burton Hospital bill and the Science Foundation bill, but we must not depend entirely upon the government to build our hospitals and direct our research, or the government will soon take over the practice of medicine. We have given up many liberties gladly during the war years but we should make it our responsibility to see that those liberties are returned to the American people. Over 600 years ago the people were fighting for their right to liberty as brought out in the declaration of the Scottish Parliament: "It is not for riches, glory or honor that we fight, but we fight for that liberty which no good man loses but with his life."

If we are to give aid to the medical society it is necessary that we be informed about the plans and actions of their organization, and that we get this information from the proper source. The national and state medical journals, the national bulletin of the Auxiliary, and *Hygeia*, will provide you with authentic material. I was recently much impressed with the effect some of the articles have on the layman. Shortly after the article on "Cold Wave" appeared in the *AMA Journal* I walked into the beauty parlor to face an enormous sign reading "More doctors' wives get cold waves than any other permanent." It was an article that stimulated much comment, and it behooves us to know the opinion expressed in our official publications. The public today is eager for reading matter on subjects pertaining to medicine but the lamentable fact is that so many unauthorized articles appear in the press. As Auxiliary members you should be informed and then in casual conversation, over the bridge table, over the back fence, or over the grocerman's counter, you may clarify many erroneous ideas. We have begun to realize that an unplanned speech bringing out a statement of

(Continued on Page 1500)

Inaugural Address of the president, Woman's Auxiliary to the Michigan State Medical Society, delivered at Statler Hotel, Detroit, September 25, 1946.

PALATABILITY AND NUTRITION FACTORS of Campbell's STRAINED BABY SOUPS

Q. What is the importance of palatability?

A. A leading pediatrician has pointed out that even in the early months of life infants are able to detect minute differences in flavor. The appealing palatability of Campbell's Strained Baby Soups is, therefore, an advantage. It should further be pointed out that all the "tastes" in these soups are the wholly natural ones of the meats, vegetables and cereals used.

Q. Why are the different ingredients selected?

A. Campbell's Strained Baby Soups are planned to provide a balance in nutrients to supplement the daily milk diet. Since it takes many different foods to supply the approximately 40 nutrients needed for infant development and energy, we use vegetables and a cereal in preparing each of the four meat soups. Flavor is improved, too. For instance, liver alone has too strong a taste for some babies, but blended with vegetables, palatability is enhanced. It should also be noted that these soups are intended for use as early in normal infancy as any other strained baby foods.

Q. What measures are taken to conserve food constituents?

A. In preparing these Baby Soups, Campbell's have developed a method, based on the latest scientific knowledge, which retains the minerals and efficiently conserves the vitamins.

A comprehensive analysis of each soup may be had upon request to Campbell Soup Company, Camden, New Jersey.

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Campbell's Strained Baby Soups represent fine quality . . . in ingredients . . . in care and method of cooking . . . in retention of minerals and conservation of vitamins . . . *and in good flavor.* Every resource of Campbell's Kitchens is devoted to that aim.

LOOK FOR THE RED-AND-WHITE LABEL

(Continued from Page 1498)

facts in a general conversation can have an immeasurable effect on the thinking of the American public. Plan at your regular meetings to have short reviews of some of the interesting articles appearing in the medical journals. If they are interesting to you, they will be interesting to your lay friends and acquaintances.

Whether it be reading, writing, arthrimetic or life, there are certain basic fundamentals we must recognize. These past war years still cast a shadow across our lives. So astronomical have been the figures involved in this war, we have forgotten how to count by ones and twos. So strange the machines and methods of destruction, we hold a false idea that the hope of the world lies in things still to spring from the ingenious mind of the scientist. The atom bomb was a marvelous scientific discovery but has it actually solved any of our problems? The fighting is over, the problems are still with us. The world is getting smaller and smaller, but the gulf between the peoples seems ever to widen. If our scientists could discover and develop an atom that would make all people strive toward a common goal, then civilization could attain lasting progress. But we are slowly realizing that the solution of today's problems must evolve from everyday living, and we, the women, must be the thread that carries the past into the future. We must be the fibres of which the morale of the American people is made. Steadfastness and purpose lie in our hands, and just as we build up a financial deposit, we must build up a mental, moral, and spiritual deposit to draw on in time of need. May I leave this thought with you for the coming year: "God grant us the serenity to accept the things we cannot change; courage to change the things we can; wisdom to know the difference."

MRS. R. H. ALTER, *President*
Jackson, Michigan

SURGERY OF THE PANCREAS

(Continued from Page 1482)

6. If the diagnosis is established early and operation is performed before the liver suffers irreparable damage, chances of survival are good.

7. Successful radial pancreatoduodenectomy in a man seventy-eight years of age is reported.

References

1. Child, C. G. III: Pancreaticojejunostomy and other problems associated with the surgical management of carcinoma involving the head of the pancreas; report of five additional cases of radical pancreaticoduodenectomy. Ann. Surg., 119: 845-855, (June) 1944.
2. Comfort, M. W., Gambill, E. E., and Baggenstoss, A. H.: Chronic relapsing pancreatitis; study of twenty-nine cases without associated disease of the biliary gastro-intestinal tract. Gastroenterology, 6:376-408, (May) 1946.
3. Crile, G., Jr., and Jaffe, H. L.: Pancreatic calculi as a rare cause of intestinal hemorrhage; report of a case. Radiology, 586:589, (June) 1946.

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Barlow-Maney enteric coating* is specially formulated to resist destruction by the normal gastric juice, yet to disintegrate easily in the intestinal tract.

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What's What

D. H. Kaump, M.D., Detroit, is the author of an original article "Laboratory Tests in Practice," which appeared in *JAMA* of October 5.

* * *

Mackinac Island needs a doctor to serve its people. There is a vacancy with a small monthly subsidy. Anyone who is interested should write Mayor Allan Sawyer.

* * *

The House of Delegates of the Colorado State Medical Society voted in September, 1946, to go into a strong public relations program, backed up by an increase in per capita dues to $50 per annum.

* * *

Carleton Dean, M.D., Lansing, addressed the Woman's Club of Ovid, Michigan, November 4, on "Rheumatic Fever Control." His address was illustrated with a motion picture.

* * *

E. H. Rowley Company announces the removal of its offices and factory to 11330 Woodward Avenue, Detroit. Mr. F. O. Peterson, president, cordially invites the members of the profession to visit the new and enlarged quarters.

* * *

Jean Paul Pratt, M.D., Detroit, has been appointed director of the scientific exhibits to be held in connection with the Third American Congress on Obstetrics and Gynecology, to be held in St. Louis, Missouri, September 8 to 12, 1947.

* * *

William R. Bond, M.D., Yonkers, New York, for the past eight years with the Medical Research Division of Schering Corporation, has been appointed lecturer in physiology and endocrinology at the Medical College of Virginia, Richmond.

* * *

L. J. Hirschman, M.D., of Detroit, presented a paper on "Some Common Proctological Conditions of Children" at the annual session of the South Carolina Medical Association. His is the leading paper of the *Journal of the South Carolina Medical Association* for October, 1946.

* * *

The third annual clinical conference of the Chicago Medical Society will be held at the Palmer House, Chicago on March 4, 5, 6 and 7, 1947. Prominent men in medicine from all sections of the United States will take part in the program.

* * *

"Doctor of Medicine" will be held at 12:45 p.m. each Friday henceforth. Broadcast over CKLW, this presentation of the Radio Committee of the Michigan State Medical Society is sponsored as a public service by the Hack Shoe Company. Speakers who have appeared include Joseph G. Molner, M.D., Ray S. Morrish, M.D., Ralph A. Johnson, M.D., A. E. Catherwood, M.D., and Andrew S. Brunk, M.D.

* * *

C. H. Peabody, M.D., Lake Odessa, was honored by members of the Barry and Ionia-Montcalm County Medical Societies at a joint meeting held in Lake Odessa on October 15. Doctor Peabody is retiring from active medical practice after forty-eight years of continuous practice. Doctor Peabody was presented with gifts from each of the societies. For the scientific portion of the program, M. M. Marrin, M.D., Grand Rapids, discussed the subject of "Burns."

* * *

"Doctor must pay $8,000 to mother. An $8,000 verdict was returned in Circuit Court against Dr. Manuel B. Goldberger, Saginaw osteopath. Dr. Goldberger was sued by Mrs. Lawrence Nichol of 2431 Thatcher. She alleged that Dr. Goldberger diagnosed the illness of her four-year-old son, Nathan, as measles instead of spinal meningitis, and that, as a result, Nathan was not given proper treatment and has lost his hearing."—*Detroit Free Press,* October 17, 1946.

* * *

L. Fernald Foster, M.D., Bay City, secretary, Michigan State Medical Society, and *A. H. Miller, M.D.,* Gladstone, medical co-ordinator, Michigan Crippled Children Commission, were guest speakers on the program of State Association of Social Welfare Boards and State Association of Boards of Supervisors, Sault Ste. Marie, September 17. Dr. Foster spoke on "Uniform Schedule for Governmental Agencies." Dr. Miller's subject was "The Work of the Crippled Children Commission for Afflicted and Crippled Children."

* * *

The National Gastro-enterological Association announces its annual Cash Prize Award Contest for 1947. One hundred dollars and a certificate of merit will be given for the best unpublished contribution on Gastroenterology or allied subjects. Contestants residing in the United States must be members of the American Medical Association. All entries for the 1947 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not

(Continued on Page 1506)

the wounds after surgery . . .

Modern surgical care recognizes that it takes more than gauze and adhesive to "bind the wounds" of the operative case. It has been demonstrated that the prevention and treatment of nutritional deficiencies may be "decisive factors" in recovery following surgery.[1] In the field of oral and parenteral vitamins, Upjohn offers a full range of highly potent, convenient to administer, economical vitamins.

1. Am. J. Surg. 44:288 (April) 1942.

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UPJOHN VITAMINS

(Continued from Page 1504)

later than April 1, 1947. Entries and requests for further details should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

* * *

The initiation of a nationwide program of public education and information on diseases of the heart was announced recently by officials of the American Heart Association. The program, according to Howard F. West, M.D., Los Angeles, president of the Association, will have as its prime purpose "the dissemination of educational information to the public in a broad effort to retard the rapid increase of heart disease throughout the nation." Among the directors of the American Heart Association is Frank N. Wilson, M.D., Ann Arbor.

* * *

A. S. Brunk, M.D., Detroit, past president of the Michigan State Medical Society, was guest speaker at the annual meeting of the Association of American Physicians and Surgeons, Chicago, November 7-8-9, 1946. The AAPS announcement re Dr. Brunk read as follows:

"Dr. Brunk is past president of the Conference of Presidents and Other Officers of State Medical Associations, and one of the nation's outstanding medical leaders."

Dr. Brunk spoke on "The Aims and Purposes of the Conference of State Presidents."

* * *

LeMoyne Snyder, M.D., Lansing has given up the practice of surgery and has opened new offices at 705 American State Bank Building, Lansing, for the practice of legal medicine exclusively. He has also formed an association with four prominent scientists for the investigation of legal matters involving scientific evidence. Dr. Snyder has practiced in Lansing for twenty years and is a past president of the Ingham County Medical Society. He graduated from Harvard Medical School in 1923, was admitted to the Bar in 1934, and is the author of the book, "Homicide Investigation."

* * *

Have you something for Parergon? The new edition of *Parergon* is now in preparation. If you wish to have any of your art works (oils, water colors, sculptures, drawings, pastels, prints, etchings, engravings, lithographs, wood blocks, linoleum blocks, photographs, colored photographs, ceramics, woodwork, metalwork, jewelry, needlework, shipmodels) considered for inclusion in the forthcoming edition (over 750 pictures) please mail perfectly glossy photo prints (8x10 preferred) immediately by airmail to Editor, *Paregon,* Mead Johnson & Company, Evansville 21, Indiana.

* * *

At the centennial session of the American Medical Association, to be held in Atlantic City, June 9 to 13, 1947, the scientific exhibit will include both the history of medicine during the past century and the latest developments of medical science.

Application blanks for space are now available. All applicants must bill out the regular forms. Applications close on January 13, 1947, after which time the Com-

(Continued on Page 1510)

To restore nasal patency in colds and sinusitis . . .

Neo-Synephrine decongests promptly . . . clears the nasal airways for greater breathing comfort . . . promotes sinus drainage. Relief lasts for several hours. Virtual freedom from compensatory vasodilatation precludes development of dependency symptoms.

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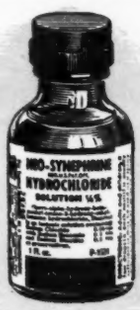

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(Continued from Page 1506)

mittee on Scientific Exhibit will make its decision and notify the applicants.

Application blanks for space should be procured as soon as possible. They are available from the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

* * *

The *Michigan Regional Fracture Committee* met at the Hurley Hospital, Flint, Michigan, Wednesday, November 20, 1946. A luncheon and business meeting preceded the scientific session at 1:30 p.m. The program was as follows:

Opening remarks, Henry Cook, M.D., Chief of Staff, Hurley Hospital

Introductory remarks: "Management of a Fracture Service in an Open Hospital" George J. Curry, M.D., Chief Division for Surgery of Trauma

"Basic Principles in Extremity Amputations" Harold W. Woughter, M.D.

"Management of Chest Trauma" Stephen M. Gelenger, M.D.

"Hip Dislocations" Hardie B. Elliott, M.D.

"Management of A Severely Burned Patient" T. S. Conover, M.D.

"Management of Ulnar Fractures" Don L. Bishop, M.D."

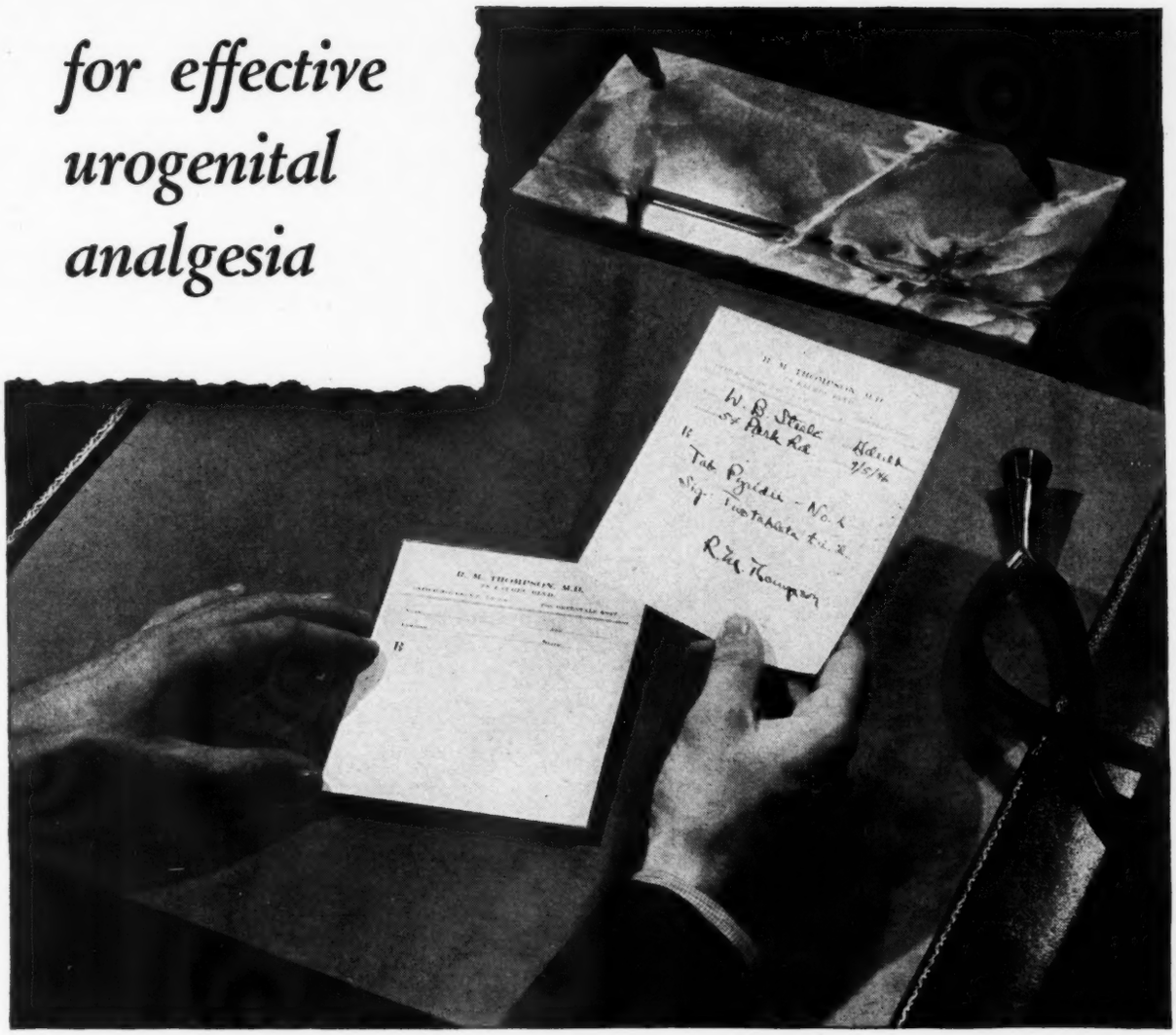
The meeting closed with a discussion period.

Case Won for Animal Experimentation. The suit recently brought by Lois Banfield, vice president of the Antivivisection League of Detroit, purporting to compel the city to abide by the strict letters of the ordinance governing the disposal of dogs by the dog pound, by which it was interpreted that dogs must be sold singly at auction and only if they were valuable as to breed, for pets, or hunting, came to trial on September 25, 1946. Nathaniel H. Goldstick, assistant corporation counsel of the city of Detroit, presented the defense for the city in a very masterful way, going into the issue which was really involved in this case, namely, an attempt to interfere with the use of dogs for experimental purposes by medical schools, hospitals and laboratories. A very strong case was presented for the necessity of using animals, in this case dogs, in experimental work.

Dr. Charles G. Johnston had arranged a splendid presentation of expert testimony by physicians, many of whom presented patients showing successful treatment that would have been quite impossible had there not been opportunity for extensive experimental work on dogs before the treatment could be applied safely to humans. Those who appeared to testify in the case were Dr. Ben I. Johnstone, Dr. F. D. Dodrill, Dr. Warren B. Cooksey, Dr. Oliver H. Gaebler, Dr. Roy D. McClure, Dr. Claude S. Bryan, professor of veterinary medicine and surgery at Michigan State College, and Dr. Bruce H. Douglas. The case was tried before Judge Arthur Webster in Circuit Court and on October 1, 1946, he

(Continued on Page 1546)

for effective urogenital analgesia



Following oral administration, Pyridium produces a definite analgesic effect on the urogenital mucosa. This action contributes to the prompt and effective relief that is so gratifying to patients suffering with distressing urinary symptoms.

Acting directly on the mucosa of the urogenital tract, this important effect of Pyridium is entirely local. It is not associated with or due to systemic sedation or narcotic action.

Therapeutic doses of Pyridium may be administered with virtually complete safety throughout the course of cystitis, pyelonephritis, prostatitis, and urethritis. *Literature on Request.*

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THE DOCTOR'S LIBRARY

Acknowledgement of all books received will be made in this column and this will be deemed by us as a full compensation of those sending them. A selection will be made for review, as expedient.

OPHTHALMOLOGY IN THE WAR YEARS. Edited by Meyer Wiener, M.D., Professor of Clinical Ophthalmology, Washington University School of Medicine, Honorary Consultant in Ophthalmology, Bureau of Medicine and Surgery, United States Navy. Volume I (1940-1943) Chicago: The Year Book Publishers, Inc., 1946. Price $13.50.

The advances of ophthalmology during the years 1940 to 1943 have been written by a group of authors and authorities each taking a subject in which he is especially interested. Each section is written in a narrative form, mentioning all advances and special studies, and each section is followed by a complete list of references to world literature. There are literally thousands of these references making this volume a most accurate index for further study.

DIAGNOSTIC EXAMINATION OF THE EYE. Step-by-step Procedure. By Conrad Berens, M.D., F.A.C.S., Clinical Professor of Ophthalmology, Columbia University; Executive Eye Surgeon New York Eye and Ear Infirmary, formerly Chairman, Section on Ophthalmology, American Medical Association, formerly Chairman American Board of Ophthalmology; Consultant to the Air Surgeon of the Army Air Forces; and Joshua Zukerman, B.Sc., M.D., C.M., F.A.C.S., Instructor in Ophthalmology, New York Eye and Ear Infirmary, and Columbia University Postgraduate School; Diplomate American Board of Ophthalmology. 400 illustrations, including forty-eight in full color on thirteen plates. Philadelphia: J. B. Lippincott Company, 1946. Price $15.00.

This book presents a direct and well outlined step-by step-method of diagnosis of eye diseases. It is sufficiently technical, but is written for the use of the student as well as the ophthalmologist. It shows how to record the findings, how to interpret them, and gives in detail all the steps in a most complete eye examination.

One part of the book is devoted to special examinations for conditions which demand very special treatment or investigation, such as anisokonia, which is carefully given. Treatment in general is omitted, as this book devotes itself to diagnosis only. Very comprehensive and very well prepared.

WOMEN IN INDUSTRY—Their Health and Efficiency. Issued under the auspices of the Division of Medical Sciences and the Division of Engineering and Industrial Research of the National Research Council. Prepared in the Army Industrial Hygiene Laboratory by Anna M. Baetjer, Sc.D., Assistant Professor of Physiological Hygiene, School of Hygiene and Public Health, The Johns Hopkins Hospital. Philadelphia and London: W. B. Saunders Company, 1946. Price $4.00.

The relation of women's health to industrial conditions has become of primary importance. The employment problem became acute with the advance of use of women in war industries. It was considered at first that women would fit into only relatively few industrial groups. This book is a response to the study undertaken to find the place of women in industry. The study is complete, and supported with statistics. The study covered the ability of women to work, their physique, types of work and policies of the plant in employment of women. A study was made of sick absenteeism of women, and a comparison with men employes. Accidental injuries afflicted men a little more often, but non-industrial accidents causing loss of working time were almost twice as frequent in women. Accidents on the first day of work were seventy-seven men to 252 women, the second day to the end of

(Continued on Page 1522)

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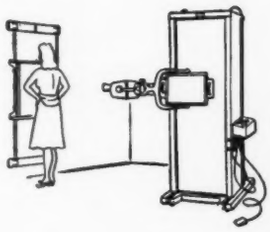

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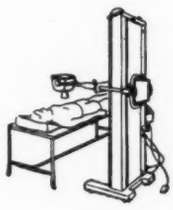

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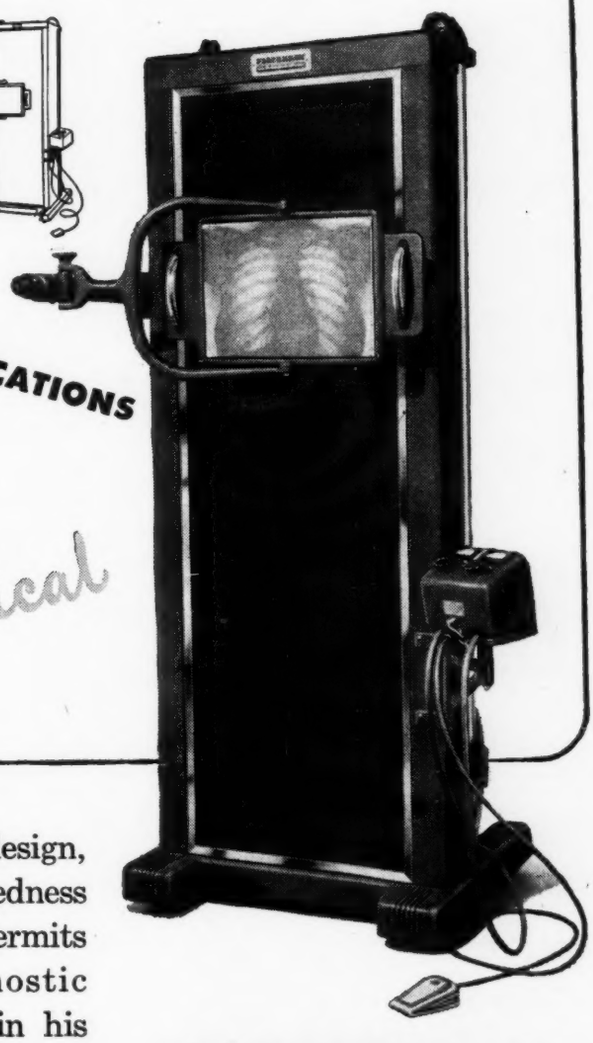

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(Continued from Page 1520)

the first week thirteen men and thirty-three women. After the second week they leveled off to fractions of one, and were about even. This little book is full of information invaluable to those dealing with women employed in industry.

HUMAN EMBRYOLOGY. By Bradley M. Patten, Professor of Anatomy in the University of Michigan Medical School. With 1,366 drawings and photographs, grouped as 446 illustrations with fifty-three in color. Philadelphia: The Blakiston Company, 1946. Price $7.00.

The heaviness of the scholastic demands on the medical student has caused the author to present the subject of embryology in its essentials, having full regard for a complete study, but eliminating all comparative and theoretical material. The book is complete, very readable, fully and carefully illustrated, and devotes special attention to the early stages of implantation and development, to supply a background for obstetrics and gynecology. A section is devoted to twins, double monsters and teratology. The development of all parts of the body is followed with detail sufficient for all purposes, medical or surgical. For further study in any given field a full bibliography is given at the back of the book.

A PRIMER FOR DIABETIC PATIENTS: An Outline of Treatment for Diabetes with Diet, Insulin and Protamine-Zinc Insulin, Including Directions and Charts for the Use of Physicians in Planning Diet Prescriptions. By Russell M. Wilder, M.D., Ph.D., F.A.C.P., Professor and Chief of the Department of Medicine of the Mayo Foundation, University of Minnesota; Senior Consultant in Division of Medicine, Mayo Clinic. Eighth Edition, Reset. 192 pages, with eight illustrations. Philadelphia and London: W. B. Saunders Company, 1946. Price $1.75.

What is diabetes, what is its cause, what will its treatment accomplish? These are some of the questions to be asked by the diabetic patient, and these are some of the questions well answered by this little book intended for the patient. It will help the doctor to help his patient. It is the ready and scientific answer the patient can have at his finger tips, and that will relieve the doctor of many interruptions in his busy rounds. Tests for sugar and diacetic acid are given, as well as diets.

PRACTICAL MALARIOLOGY. Prepared Under the Auspices of the Division of Medical Science of the National Research Council by Paul F. Russell, M.D., M.P.H., Colonel, M.C., A.U.S., Parasitology Division, the Army Medical School; Field Staff, International Health Division, Rockefeller Foundation (On Leave); Luther S. West, Ph.D., head of Biology Department, Northern Michigan College of Education; Major Sn.C., A.U.S., (Reserve) formerly Entomologist, Parasitology Division, Army Medical School; and Reginald D. Manwell, Sc.D., Professor of Zoology, Syracuse University, New York; formerly Captain Sn.C., A.U.S., Protozoology Section, Parasitology Division, Army Medical School. Foreward by Raymond B. Fosdick, President of the Rockefeller Foundation. 238 Illustrations, eight in Color. Philadelphia-London: W. B. Saunders Company. 1946.

This is a complete study of the most modern things known about malaria, its causes, modes of infection, forms of the parasites, methods of microscopic study, and treatment. This later includes the use of preventive materials, DDT, and others. Pictures of the infected sites of mosquito incubation, and means of combating the scourge. Malaria control under military conditions is especially treated with a goodly section of the book. This book is a must in regions of malaria. In our own state it is useful, for we are having cases, and we must know the best method of approach.

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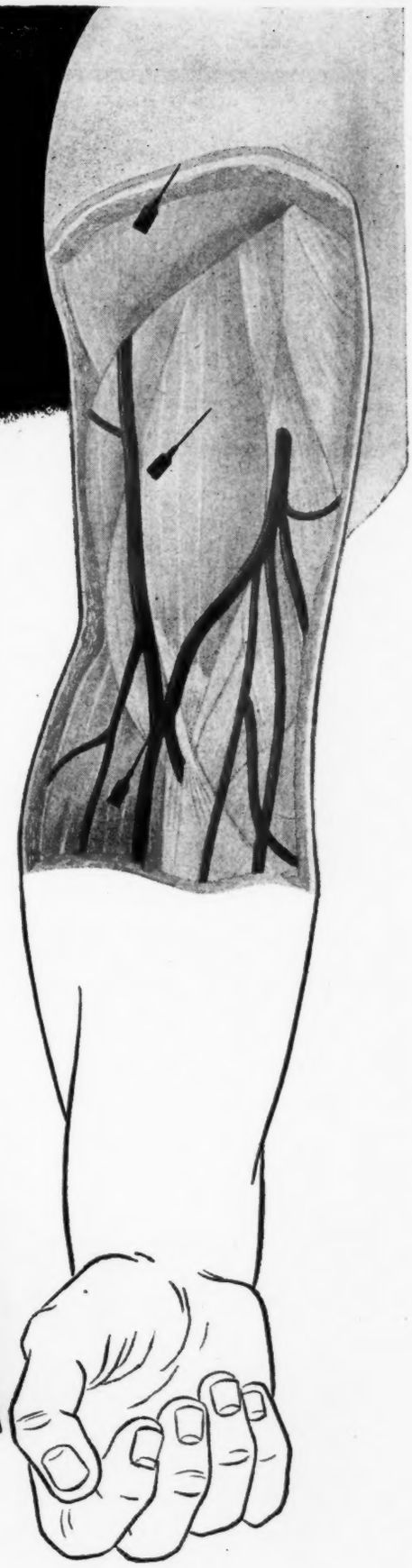

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CEREBRAL PALSY PROBLEM

(Continued from Page 1492)

way, reduplicating effort. The parents of these children, too, are anxious that their offspring be cared for. Educational programs designed to clarify the individual problems will go far in promoting co-operation in the home.

The excellent Crippled and Afflicted Program in the State of Michigan is exemplified in the qualified outpatient clinics strategically located. Hospitals and convalescent units already exist and understand the problems revolving about the crippled and afflicted child. Handicapped divisions (orthopedic schools) exist within the public school system and rehabilitation agencies are functioning each day. The need for a section to care for cerebral palsies in this organizational chain is obvious. The present clinics, hospitals, and convalescent units by augmenting their facilities to meet the requirements of a satisfactory training and schooling program will go a long way to cope with the problems presented by this group of cerebral palsied children.

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THE VETERAN POPULATION

The veteran population of the United States on August 31 was 17,499,000, according to a Veterans Administration report, which revealed also that there were about 13,538,000 World War II veterans and about 3,961,000 veterans of World War I and other years. During the last week of the month, 104,664 veterans were being rehabilitated as disabled veterans under Public Law 16; 1,145,634 were receiving education and on-the-job training under Public Law 346, and 2,067,740 veterans were listed as receiving disability compensation and pensions.

—Editorial, *Journal AMA*, October 12, 1946.

WHAT'S WHAT

(Continued from Page 1510)

handed down a very complete opinion, dismissing the suit and indicating that the city was carrying out the spirit of the ordinance in providing for the sale of dogs to medical schools and laboratories. Because of the completeness of the presentation of the case and the clear-cut opinion handed down, it is believed that this should put an end to this type of litigation at least for some time.—*Detroit Medical News*, Oct. 14, 1946.

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—Editorial, *Nebraska State Medical Journal*, October, 1946.

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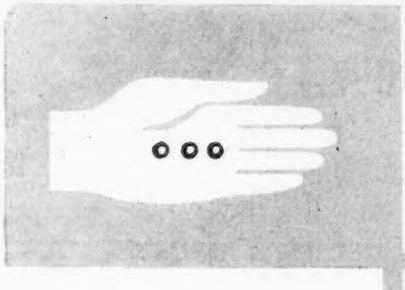

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O. R. Yoder, M.D.....Ypsilanti

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L. E. Showalter, M.D.....Cadillac
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L. Fernald Foster, M.D., *Chairman*, Bay City
(Plus Section Officers)

(Continued on Page 1558)

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Mark Marshall, M.D.....Ann Arbor
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M. M. Marrin, M.D. (1950)..... Grand Rapids
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D. R. Smith, M.D. (1947)..... Iron Mountain
LeMoyne Snyder, M.D. (1948)....Lansing

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P. A. Riley, M.D. (1949).....Jackson
J. M. Robb, M.D. (1948).....Detroit
W. R. Torgerson, M.D. (1947)..... Grand Rapids
J. J. Walch, M.D. (1947).....Escanaba

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P. L. Ledwidge, M.D.....Detroit
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H. J. Meier, M.D.....Coldwater
F. J. O'Donnell, M.D.....Alpena
E. A. Oakes, M.D.....Manistee
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Arch Walls, M.D.....Detroit
C. L. Weston, M.D.....Owosso
G. A. Zindler, M.D.....Battle Creek

MSMS COMMITTEE PERSONNEL

(Continued from Page 1556)

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Alfred LaBine, M.D.....Houghton
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Frank VanSchoick, M.D.....Jackson
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G. J. Curry, M.D.....Flint
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O. A. Brines .....Detroit
Wm. Bromme .....Detroit
W. C. C. Cole .....Detroit
W. W. Ellet .....Benton Harbor
H. B. Fenech .....Detroit
James Fyvie .....Manistique
J. V. Fopeano .....Kalamazoo
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Branches of the Michigan State Medical Society

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J. E. Mahan, Secretary.....Allegan

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Harold Kessler, Secretary.....Alpena

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Proposal for Schools for Medical Associates

Under the Direction of the Colleges of Medicine and Dentistry of Wayne University, the University of Michigan, and the Michigan State Medical Society

FOREWORD

BY reason of the great need for Medical Associates, the proposed Bulletin descriptive of suggested courses is presented for consideration and study.

The direction of the plan could be carried through by the University of Michigan, Wayne University, and the Michigan State Medical Society.

Division of Clinical Laboratory Technicians

In providing information for the internist or surgeon, a clinical laboratory technician comes in closest contact with all concerned in obtaining and recording clinical facts relative to the patients.

For the individual scientifically inclined with sociological leanings, this is a field of exceptional opportunity.

Courses for Clinical Laboratory Technicians

(In addition to preliminary requirements elsewhere noted, subject material covers the following.)

I. Physiological Chemistry
II. Blood Analysis
  A. Immunology
    Serology
      Wassermann tests
      Kahn tests
      Kline tests
  B. Blood Typing
  Rh Factor
  C. Agglutination Typhoid
    Undulant fever, et cetera
III. Bacteriology
IV. Cutting and Preparation of Tissue
V. Electro-Cardiology
  A. Basal Metabolism
  B. Blood Bank (Typing)
  C. Allergy (Testing)
VI. Biological Chemistry
VII. Clinical Laboratory Methods
VIII. Practice of Medical Technology

Division of Dental Hygiene

The general function of the dental hygienist is to assist in the maintenance of the health of the mouth by prophylaxis, and instructing patients in methods of mouth cleanliness. The demand for the dental hygienist has arisen from recognition of the benefits to be derived from prophylactic care of the teeth, and from the fact that the needs of the public for such service is greater than can be supplied by dentists. Dental hygienists assist the dentist in operations and in the laboratory; they may be employed in schools, public institutions, and industrial plants under the supervision of the dentist. The dental hygienists are trained in insufficient numbers.

Possible Courses for Dental Associates

I. Dental Laboratory Technicians
  A. Carving and Preparation of Inlay Patterns
  B. Casting and Finishing Gold
  C. Processing and Finishing Dentures
  D. Arrangements and Alignment of Dentures
  E. Soldering and Welding in Partial Dentures
II. Dental Assistants at Chair
  A. Mixing of Materials
    Dental Alloy
    Cements
    Impression Materials
  B. Sterilization
    Casts
    Models
    Developing and Processing X-ray Films
  C. Et cetera
III. Dental Hygienist

First Year	*Second Year*
Anatomy	Bacteriology
Chemistry	Dental Materials and Manipulations
Child Health	English
Dental Anatomy	Materia Medica
English	Therapeutics
General Hygiene	Nutrition
Oral Hygiene	Oral Pathology
Orthodontic Technique	Radiology
Clinical Assignments	Office Management
Histology	Periodontology

Division of Dietetic Associates

One of the great world problems today is that of food. While this is being written, whole masses of the human race are dying because the production, distribution, and preparation of food is inadequate. One of the basic causes of war is the lack of food, or maldistribution of it.

(Continued on Page 1566)

Presented and prepared for consideration and study by the Commission on Health Care of the Michigan State Medical Society, September 22, 1946.

Steroid T

This stroboscopic-type photograph depicts joint mobility, increase of which is one of the frequently reported observations in steroid therapy in arthritis with Ertron—Steroid Complex, Whittier.

Therapy in Arthritis

with Ertron–Steroid Complex, Whittier

★THERAPEUTICALLY EFFECTIVE

The unique chemical and clinical characteristics of Ertron have identified this important preparation as the outstanding agent in the treatment of arthritis today.

★CLINICALLY PROVED

With its twelve-year background of clinical application, Ertron therapy is established firmly as an effective and safe procedure. From the published reports it is evident that the action of Ertron is systemic, an essential feature in the treatment of a systemic disease such as arthritis.

★CHEMICALLY DIFFERENT

Chemically, it has been shown that the distinctive method of ergosterol-activation —the Whittier Process—provides in Ertron a number of recently isolated steroid substances of unique molecular structure.

Each capsule of Ertron contains 5 milligrams of activation-products, biologically standardized to an antirachitic activity of fifty thousand U.S.P. Units.

Physician control of the arthritic patient is essential for optimum results. Ertron is available only upon the prescription of a physician.

Supplied in bottles of 50, 100 and 500 capsules. Also—for supplementary intramuscular injection Ertron Parenteral in packages of six 1 cc. ampules.

Ertron is the registered trademark of Nutrition Research Laboratories.

ETHICALLY PROMOTED

NUTRITION RESEARCH LABORATORIES • CHICAGO

(Continued from Page 1562)

Where distribution is adequate or partial, the preparation of food, its analysis, and its balancing becomes essential. The manufacture of the vitamins is important, but manufactured vitamins are infinitesimal in importance as compared to the natural vitamins as properly prepared under the direction of the trained dietitian.

The field of dietetics has only been touched, and trained personnel is woefully inadequate. Whether in preparation to direct the dietetic department of a great hospital, a large population, or one's own kitchen, dietetics is indispensable.

Courses for Dietetic Associates

(The following courses subject to required preliminary high school and other requirements, constitute the major subjects for study in pursuing the course in Dietetics.)

I. Chemistry
   A. General Inorganic
   B. Organic
   C. Biochemistry
II. Biology
   A. Physiology
   B. Bacteriology
III. Social Sciences
   A. Psychology
   B. Sociology
   C. Economics
IV. Education
   A. Educational Psychology
   B. Methods of Teaching
   C. Principles of Education
V. Foods
   A. Food Selection and Preparation
   B. Head Planning and Service
VI. Nutrition and Dietetics
   A. Normal Nutrition (general)
   B. Advanced Nutrition
   C. Diet in Disease
VII. Institution Economics
   A. Quantity Cookery
   B. Organization and Management

The following may be added:

VIII. Analytical Chemistry
   A. Food Chemistry
   B. Advanced Biochemistry
   C. Advanced Physiological Chemistry
   D. Quantitative Chemistry
IX. Zoology
   A. General Biology
X. Advanced Psychology
   A. Personnel Management
   B. Community Organization
   C. Consumer Economics
   D. Economic Geography
XI. Methods of Teaching Nutrition
XII. Experimental Cookery
XIII. A course (seminar) which develops the ability to read and interpret current scientific literature
XIV. Accounting
   A. Institution Marketing
   B. Institution Equipment

Division of Medical Secretaries

The medical secretary who truly prepares to associate herself with the medical profession enters a field as distinctive in the realm of stenography and associated skills as does the court stenographer. The work requires the development in a sense, of a language peculiar to medicine. It is a distinctive field, and there are too few prepared to qualify. Medical secretaries now rank second to the clinical laboratory technicians in total numbers reported by hospitals.

Possible Courses for Medical Secretaries

I. Medical Stenography
II. Typing
III. Bookkeeping for Professional Office
IV. Business Correspondence
V. Business English
VI. Dictaphone
VII. Public Speaking
VIII. Business Arithmetic

Division of Medical Librarians and Library Research

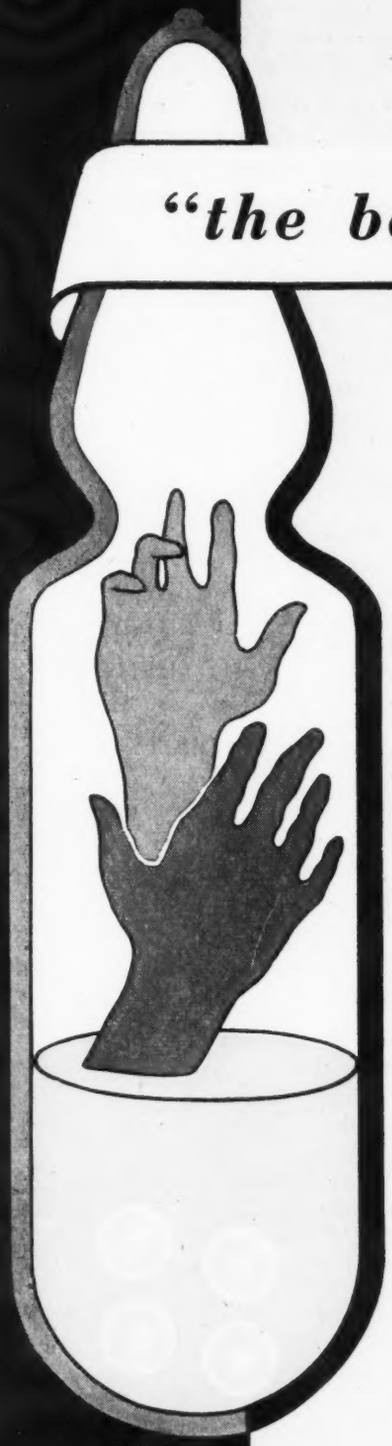
The medical division of the public library, the library of the medical college, or of the hospital, is an important center of the institution. Every medical group is dependent upon excellent reference to books and to journals. "Without knowledge of what others have discovered, daily experience cannot be resourcefully interpreted." The medical library is essential in hospitals to interns and resident physicians, and is used for preparation of reports for staff meetings and clinical reference. To all physicians it serves as a continuation of their education. The person interested in the fields of scientific and literary research and in the field of the humanities, finds a rich field and satisfaction as a medical librarian.

In addition to library experience as outlined in regular library courses, the field of the Medical Librarian constitutes an important specialty.

Possible Courses for Medical Librarians

I. Organization and Functions of the Record Department
II. Interdepartmental Relations
III. Required Indexes

(Continued on Page 1568)



AGAIN IN 1946

"the best form of treatment"

"...gold salts...afford the best form of treatment in rheumatoid arthritis" and "...will markedly change the course of the disease in a significant percentage of patients."[1]

SOLGANAL-B OLEOSUM (aurothioglucose) continues to be one of the most widely used gold compounds because it provides maximum therapeutic benefits with minimal toxicity.

SOLGANAL-B OLEOSUM

In SOLGANAL-B OLEOSUM ($C_6H_{11}O_5SAu$) water soluble gold is suspended in oil solution to provide steady, even and prolonged absorption from intramuscular depots. In this form gold has benefited approximately four out of every five patients afflicted with rheumatoid arthritis.

Details of administration accompany each package of SOLGANAL-B OLEOSUM; or they may be obtained by writing the Medical Research Division.

1. Ragan, C., and Boots, R. H.: New York Med. 2:21, 1946.

Trade-Mark SOLGANAL-B OLEOSUM—Reg. U.S. Pat. Off.

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IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

(Continued from Page 1566)

IV. Medicolegal Problems
V. Statistics
VI. Staff Relationship
VII. Confidential Nature of Records
VIII. Insurance Reports

Division of Medical and Surgical Art and Photography

The demand in the field of Medical and Surgical Art is in excess of artists in this field. Both in the field of education in the Medical School, and in hospital practice, the artist has an important place. It is a field that is well paid, and to the individual with a combination of scientific interest and artistic talent, it offers fine opportunities.

Possible Courses in Medical and Surgical Art

I. The Medical and Surgical Artist
   A. Anatomy
   B. Free Hand Drawing
   C. Color
   D. Design
   E. Still Life
   F. Perspective
   G. Life Drawing
II. Medical Photography
   A. Cameras
   B. Making of Lantern Slides and Films
   C. Movie Projectors
   D. Chemistry of Photography
   E. Dark Room
   F. Finishing and Retouching
   G. Operating Room and Ward Procedure
III. Medical and Surgical Visual Education.

Division of Nursing

The care of sick people, whether of parents, or brothers or sisters, of babies, or neighbors, is inherent in the character of every woman to some degree. It begins in children in the care of their dolls.

This instinct, if it may be so called, began to take organized form, when as someone has said, "The nursing profession was born when one woman cared enough to risk position, reputation, and security to fight to see that her nation took care of its sick and wounded in the best possible way. She had to face great odds, prejudice, sneers and apathy. Her fight took her to the highest authorities in her government, through the red tape of army tradition, and brought a new healing force to the world. Today every nurse needs to rediscover those fighting qualities."

For the young woman graduating from high school or college and looking to the future, no vocation gives greater satisfaction in any field than this. Whether one goes on to active service, to teaching, or to becoming the mother in a house, no time is lost having been spent in training in the nursing profession, hallowed now in the memory and biography of that great nurse and benefactor to the human race—Florence Nightingale.

Division of Nursing Associates

Courses

(Subject to preliminary requirements, the following gives a brief outline of courses taken.)

I. Anatomy and Physiology
II. Microbiology
III. Chemistry
IV. Health Education
V. Phychology
VI. Nursing Arts
VII. Nutrition
VIII. Foods and Cookery
IX. Diet Therapy
X. Sociology
XI. History of Nursing
XII. Pharmacology
XIII. Medical Science
XIV. Medical and Surgical Nursing
XV. Surgical Specialties
   A. Operating Room
   B. Gynecology
   C. Ophthalmology
   D. Orthopedics
   E. Genito-Urinary
   F. Ear, Nose and Throat
XVI. Communicable Diseases and Tuberculosis
XVII. Obstetrical Nursing
XVIII. Pediatric Nursing
XIX. Medical Psychology (Psychiatric Nursing)
XX. Nursing and Health Service in the Family
XXI. Advanced Nursing and Elective Ward Management
XXII. Social Adjustments

Clinical Experience Includes

I. Preclinical
II. Medical Nursing
III. Surgical Nursing
IV. Operating Room
V. Diet Kitchen
VI. Pediatric Nursing
VII. Obstetrical Nursing
VIII. Special Services
   A. Communicable Disease Nursing (including V.D.)
   B. Tuberculosis Nursing
   C. Dermatology
   D. Orthopedic Nursing
   E. Gynecology and Genito-Urinary Nursing
   F. Eye, Ear, Nose and Throat Nursing

(Continued on Page 1572)

December is a Par-Pen month

The demand for an aqueous penicillin-vasoconstrictor combination for local rhinological use has been answered with PAR-PEN.

PAR-PEN combines the potent antibacterial action of penicillin and the rapid, prolonged vasoconstriction of Paredrine Hydrobromide Aqueous. The value and clinical applications of PAR-PEN will be immediately apparent to every physician.

Smith, Kline & French Laboratories, Philadelphia

the penicillin-vasoconstrictor combination

Par-Pen

for Greater Systemic Response in Arthritis

IN the management of arthritis and its associated systemic disturbances, all the essential vitamins must be supplied in amounts many times greater than those required for normal maintenance.

Darthronol presents—in one capsule—nine vitamins in sufficiently large dosage to promote optimal therapeutic response in patients afflicted with chronic arthritis.

Complete bibliography on request.

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(Continued from Page 1568)

G. Out-Patient Department
H. Visiting Nurse Association
I. Psychiatric Nursing

Division of Occupational Therapeutics

For the bed patient who is sufficiently well, and the ambulatory patient, the helpfulness of Occupational Therapeutics is increasingly being recognized. There are three schools in Michigan now giving courses and offering clinical work in cooperation with various hospitals. College work is given at the State Normal School at Ypsilanti, Western Michigan College at Kalamazoo, and Wayne University. The field is relatively new and many Medical Associates in this field are needed.

Courses in Occupational Therapeutics

In addition to the preliminary college requirements, the following courses are given.

I. Biological
   A. Anatomy
   B. Kainesology
   C. General Medicine
   D. Tuberculosis
   E. Psychiatry
   F. Postoperative Surgery
II. Crafts
   A. Letter Work
   B. Weaving
   C. Braiding
   D. Metal Craft
   E. Printing
   F. Woodwork
   G. Basketry
III. Craft Analysis

Division of Ophthalmic Associates

The field of optics, the physics of light, the physics of mechanics and of eye movement, the biology and biological development of the eyes and their relationship to happiness and efficiency in life creates a fascinating field in the sociological and scientific world.

For the individual adapted to it, work of this very great importance to society presents an opportunity for association with the medical profession in the distribution of medical care that, earnestly pursued, can result not only in a vocation offering good financial reward but reward in the satisfaction of human service. In the modern world with the ever-increasing and exacting demands on vision, the field becomes as large as the population of the world itself.

The camera, the microscope, the telescope, their theory and use are all of concern to the ophthalmologist, and create a fascinating related hobby for the ophthalmic associate in the field of Photography, Microscopy, and Astronomy. The care of the eyes of the world is centered in the laboratory, office, and hospital of that branch of medical and surgical care known as Ophthalmology.

Courses for Ophthalmic Associates

(Brief Partial Outline Only). In addition to such preliminary training as shall be requested, and in addition to such clinic and laboratory hours as shall be presented, the following general outline of courses will be pursued, modified to the use of the ophthalmic associates.

I. The History of Ophthalmology
II. Embryology, Anatomy and Postnatal Development of the Eye
III. Physiology and Physiologic Optics
IV. Diseases and Pathology of the Eye. General Survey
V. Refraction
VI. Movements of the Eye Ball and Their Anomalies
VII. Orthoptic Training
VIII. The Eye and the Nervous System
   A. Neuro-Ophthalmology
   B. Visual Disturbances of Central Origin
   C. Ocular Symptoms in Diseases of the Brain
   D. Spinal Cord and Meninges
IX. Perimetry
   A. The Color Sense and Its Derangements
   B. Aniseikonia
X. Surgery
   B. Bacteriology
XI. Laboratory Techniques
   A. Pathology
   (General Considerations Only)
XII. The Fitting of Frames
XIII. The Camera, Microscope, and Telescope

Division of Orthopedic Technicians

There is scarcely a branch of the whole field of medicine and surgery more closely integrated in its effects on the whole human body and mind than the field of Orthopedic medicine and surgery. Some one has said that while Napoleon remarked that "an army marches on its stomach," no matter how full their stomachs may be, soldiers will not march far with painful feet. During the first World War 30 to 40% of all men examined were found to have disabilities resulting from flat or weak feet or other foot disturbances. If this is true of those in the selective service age among young men, what of the rest of the whole population from infancy to old age?

A man may be as old as his arteries but he acts as old as his feet and legs. Surely "the race moves

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forward on the feet of little children." To the young man or woman interested in mechanics, in the field of sociology, and in association with the profession of medicine, a field of service of financial competence is here visualized. It is an associate field to medicine and surgery, and it relates also to the great shoe industry. It is a field that gives satisfaction in human service.

Courses for Orthopedic Technicians

(Brief partial outline only. Preliminary requirements elsewhere noted.)

I. General Brief Studies of Embryology and Anatomy of the Human Body
   Special Detailed Studies of the Spine, Hips, and Lower Extremities
   Comparative Anatomy of the Extremities
II. Congenital Defects and Deformities
III. Biomechanics of the Spine, Hip, Knee, Ankle and Foot
IV. Basic Principles of Foot and Ankle Disturbances
V. General Pathological Defects of the Feet and Ankle
VI. Basic Principles of Treatment of the Foot and Ankle
   Non-operative treatment
   Rest and Pain
   External Appliances
   Physical Therapy
   Exercises
   Massage
   Contrast Baths
   Manipulation
   Shoes
   Felt Pads
   Arch Supports
   Adhesive Plaster
   Bandages
   Braces, Casts, Splints, Crutches
   Artificial Limbs
   Plaster of Paris and Plaster Bandages
   X-ray Techniques
   Plaster Models of the Feet
VII. Effects and Treatment of Poliomyelitis
VIII. Dermatological Affections of the Foot and Ankle
IX. Abnormalities and Affections of the Toenails
X. Foot Hygiene and Sanitation
XI. The Relation of the Back Pelvis, Hip and Thigh to the Foot and Ankle

Division of Physical Medicine

Physical Medicine in its most elemental forms has been used as agents of medicine since the recorded history of the human race. In more recent years a greater scientific application in the use of light, heat, cold, water, electricity, and mechanical agents has been formulated, so that mechanical and physical measures are now extensively used in the diagnosis and treatment of disease.

In most of our large sanitariums and in the physical therapy departments of many hospitals, facilities are available for the use of these measures, and in some countries such as Sweden, extensive use is made of physical medicine. It is very common in such countries as these for men to devote their lives to the subject of massage, electrotherapy, thermotherapy, et cetera.

In the practice of medicine and surgery in America the value of these measures is becoming increasingly better known as they are increasingly utilized. The AMA now has an organization council on Physical Therapy, and the American Congress of Physical Therapy is helping to disseminate knowledge of this branch of medicine. It becomes, therefore, a field of great importance in the practice of medicine and affords a vocation for many men and women who wish to be associated with the medical profession in the prevention, treatment, and cure of disease.

The modern physician who keeps abreast of the great advances in the physical sciences and brings them to the assistance of his patients depends upon the physical therapy technician to contribute widely to the scope of his services.

Courses in Physical Medicine

I. History of Physical Therapy
II. Thermotherapy
   A. General Application of Heat
   B. Local Application of Heat
   C. Local and General Application of Cold
III. Light Therapy
   A. The Physics of Light
   B. Sources of Therapeutic Light
   C. Physiological Effects of Light
   D. Technique of Application of Light Rays
   E. Indications for Ultra-Violet Irradiation
   F. Indications for Luminous Heat Infra-red Radiation
IV. Electrotherapy
   1. The Constant Galvanic or Direct Current
      A. Physics of Electricity
      B. Sources and Methods of Production of Constant Current
      C. Physiological Effects of Constant Current
      D. Technique of Application of Constant Current
      E. Indications for Therapeutic Use of Constant Current
      F. Contraindication, Dangers, and Limitations of Use of Constant Current
   2. Static Electricity
      A. Physical Effects of Static Electricity
      B. Techniques of Application
      C. Indications for Employment
      D. Contraindications for Employment

(Continued on Page 1576)

(Continued from Page 1574)

3. Faradic Current
4. The Interrupted Galvanic and Sinusoidal Currents
5. Diathermy

V. Hydrotherapy
1. General Hydrotherapy
A. Physics
B. Sources (Methods of Application)
Baths
Pools
Sprays
Douches
Affusions
Packs
Et cetera
C. Physiologic Effects
D. Techniques of General Application
E. Indications for Employment of General Hydrotherapy
F. Contraindications, Limitations, and Dangers of General Hydrotherapy
2. Local Hydrotherapy
A. Physics
B. Sources
Baths
Sprays
Irrigations
Local packs or compresses
C. Physiologic Effects
D. Techniques of Local Application
E. Indications for Employment of Local Hydrotherapy
F. Contraindications, Dangers, and Limitations of Local Hydrotherapy

VI. Mechanotherapy
1. Massage
A. History of Massage
B. General Anatomy
Special consideration to:
the skin
connective tissue
muscles
the large blood vessels
the large nerve trunks
the large viscera of the abdomen
the bones, joints, and ligaments
C. The Physiological Effects of Massage
D. The Therapeutic Applications of Massage
E. The Mechanical Procedures of Massage
F. Joint Movements
G. Massage of Special Regions
2. Exercise
A. Physical Principles
B. Sources and Methods of Administering Correction or Therapeutic Exercise
C. Physiology of Exercises
D. Techniques and Medical Management
E. Occupational Therapy
F. Indications for Employment of Therapeutic Exercises
G. Contraindications, Dangers, and Limitations of Therapeutic Exercises
3. Rest and Relaxation
4. Mechanical Devices

VII. Clinical Aspects of Physical Medicine
A. Physical Therapeutics in Relation to General Medicine and Surgery
B. Physical Therapeutics of Arthritis
C. Physical Therapeutics in Relation to Orthopedic Surgery
D. Backache (Relation of Physical Therapeutics to Its Management)

VIII. The Hospital and Office Departments of Physical Therapy
A. Agencies which will give advice on departments of physical therapy
B. Construction of Department
C. Personnel
D. Treatment in the Department

Division of X-Ray Technicians

The x-ray technician who serves as important part of the personnel in the organization of a roentgenologist, is a division of medical associates who come in close contact with the technical aspect of the practice of medicine and surgery, and offers a field to the person adapted to it that is superior in the field of technology.

Courses for X-Ray Technicians

(In addition to requirements elsewhere noted, the following main divisions are required.)

I. Physics
A. Physics of Light
B. Mechanics of Physics
C. X-Ray Machines
II. Chemistry of Photography
A. Dark Room Procedure
III. Anatomy
IV. Ethics
V. Hydrotherapy
VI. Clinical Practice
VII. Et cetera

The only vasoconstrictor-sulfonamide which contains Micraform

Micraform sulfathiazole crystals are extremely minute—approximately 1/1000 the mass of ordinary crystals.

Because Paredrine-Sulfathiazole Suspension contains these minute Micraform crystals, it does not cake or clump, and does not inhibit normal ciliary action. (See the clinical drawings on the opposite page.)

Moreover, when ciliary action is impaired by infection, the Suspension's Micraform sulfathiazole spreads in a fine, even film over the affected mucosa, where it establishes bacteriostasis which often lasts for hours.

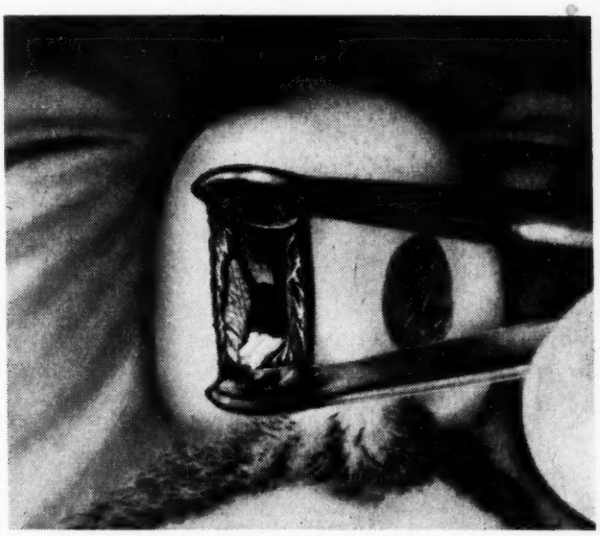
Rhinitis . . . Sinusitis . . . Nasopharyngitis . . . Pharyngitis

Paredrine-Sulfathiazole Suspension *Vasoconstriction in minutes . . . Bacteriostasis for hours*

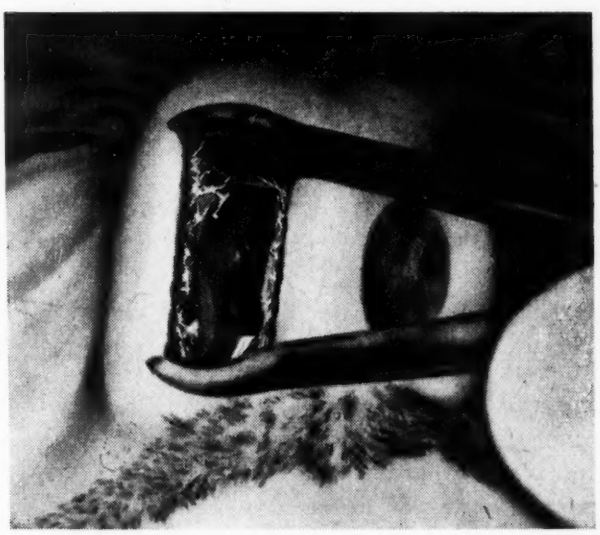
No ciliary inhibition . . .

No caking . . . No clumping

sulfathiazole



● Five minutes after instillation of Paredrine-Sulfathiazole Suspension in a convalescent nose, the cilia are already forming streams of Micraform sulfathiazole.



● 35 minutes later, the cilia have swept almost all the sulfathiazole away. There is no caking or clumping on *ciliated* epithelium. A few crystals, dried by inspired air, still adhere to the *non-ciliated* anterior borders of the turbinates and to the vibrissae.

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County Secretaries' Conference

Seventy-one persons attended the County Secretaries' Conference held September 25, 1946, on the occasion of the 81st Annual Session of the Michigan State Medical Society in Detroit.

Michael A. Gorman, Editor of the *Flint Journal*, highlighted the program with "A Newspaperman's View of the Medical Profession."

"Modern Medical Public Relations" was discussed by Hugh W. Brenneman, Lansing, MSMS Public Relations Counsel.

L. Fernald Foster, M.D., Bay City, MSMS Secretary, presented a talk on "Medicine Moves Forward."

G. B. Saltonstall, M.D., Charlevoix, Chairman of Secretaries, acted as toastmaster.

The twenty-four County secretaries present at the Conference were:

U. M. Adams, M.D., Cass; L. M. McBryde, M.D., Chippewa-Mackinac; T. Y. Ho, M.D., Clinton; D. R. Smith, M.D., Dickinson-Iron; R. B. MacDuff, M.D., Genesee; F. T. Lossman, M.D., Grand-Traverse-Leelanau-Benzie; J. J. McCann, M.D., Ionia-Montcalm; J. R. Brink, M.D., Kent; Ray M. Duffy, M.D., Livingston; D. B. Wiley, M.D., Macomb; S. A. Stealy, M.D., North Central Counties; Wm. S. Jones, M.D., Menominee; Florence Ames, M.D., Monroe; Thomas J. Kane, M.D., Muskegon; L. Fernald Foster, M.D., Bay; G. B. Saltonstall, M.D., Northern Michigan; Charles H. Flint, M.D., Oceana; W. F. Strong, M.D., Ontonagon; G. J. Kemme, M.D., Ottawa; A. L. Callery, M.D., St. Clair; M. R. French, M.D., Van Buren; L. Dell Henry, M.D., Washtenaw; Warren Babcock, M.D., Wayne; Gordon C. Tornberg, M.D., Wexford; and Executive Secretaries, Sara Burgess of Genesee County and Else Kolhede, Wayne.

W. B. Harm, M.D., Detroit, President of the Wayne County Medical Society, was also present.

MSMS officers who attended included:

Councilors C. E. Umphrey, M.D., Detroit, Wilfrid Haughey, M.D., Battle Creek, R. C. Pochert, M.D., Owosso, W. E. Barstow, M.D., St. Louis, D. W. Myers, M.D., Ann Arbor and E. R. Witwer, M.D., Detroit.

Among others who attended were:

Louis H. Clerf, M.D., Philadelphia; J. M. Robb, M.D., C. E. Simpson, M.D., R. L. Novy, M.D., E. C. Texter, M.D., E. C. Long, M.D., and C. L. Candler, M.D., of Detroit; Eugene C. Keyes, M.D., Dearborn; E. I. Carr, M.D., Lansing; T. K. Gruber, M.D., Eloise; S. L. Loupee, M.D., Dowagiac; M. R. Burnell, M.D., and Sara Burgess, Flint; John Foster, Executive Secretary, South Dakota Medical Association; Ray E. Smith, Executive Secretary, Indiana State Medical Association; Wm. J. Burns, Executive Secretary, Michigan State Medical Society; Rosemary Wurzer, Professor F. E. Armstrong, Captain L. A. Potter, J. C. Ketchum, Gordon Goodrich, Harry Lipson and H. W. Brenneman.

Michigan Veterans' Trust Fund

Michigan is recognized throughout the country as a leader among states in providing for the emergency needs of its servicemen of World War II. The Legislature set aside from surplus in the State Treasury, a postwar reserve fund of $50,000,000 "for the purpose of liquidating Michigan's obligations, after termination of the war, to its returning servicemen, their widows or dependents" and subsequently created the Michigan Veterans' Trust Fund and its Board of Trustees, giving it control of the Fund and outlining in general terms provisions for administration.

The Fund is administered entirely by World War II veterans, solely for the benefit of World War II veterans and their dependents. The money is actually on hand for the purposes set forth.

The corpus of the Fund will remain intact, and the annual income now running comfortably over $1,100,000 will be available to veterans and their dependents for emergency needs in years to come.

An "emergent need" is one arising in the life of a serviceman or woman which requires funds over and beyond his ability to pay from earnings or accumulated savings, creating a temporary situation that cannot be sufficiently promptly met through normal channels available under Federal or State laws or private organizations.

For instance, emergency medical treatment and hospitalization of a veteran who is ineligible or unable to procure this service elsewhere, would be considered an "emergent need" by the administrators of the Michigan Veterans' Trust Fund. The income from the Fund may be considered practically a "bread and butter" resource to those who find themselves out of work and with families to be fed, clothed and sheltered and supplied necessary health service.

Administration decentralization, to achieve greater efficiency, has been obtained by the creation of Fourteen Districts and Local Committees.

For information on personnel of local committees or on any phase of the Trust Fund activities, contact the Executive Secretary, L. J. Lalone, Cadillac Square Bldg., Detroit 26.

Contributions and Pledges to Michigan Foundation for Medical and Health Education

From September 18, 1945 to November 1, 1946

Allegan County Medical Society	$ 85.
Anonymous (Memory of Mother)	$ 1,000.
Regis F. Asselin, M.D., Detroit	5.
R. H. Baribeau, M.D., Battle Creek	50.
Barry County Medical Society	50.
M. G. Becker, M.D., Edmore	1,000.
A. P. Biddle Estate	2,933.81
Branch County Medical Society	85.
C. D. Brooks, M.D., Detroit	1,000.
J. D. Bruce, M.D., Ann Arbor	1,000.
A. S. Brunk, M.D., Detroit	1,000.
E. I. Carr, M.D., Lansing	1,000.
H. R. Carstens, M.D., Philadelphia, Pa.	1,000.
L. G. Christian, M.D., Lansing	100.
R. E. Clark, M.D., Detroit	25.
Clinton County Medical Society	50.
C. V. Costello, M.D., Holland	1,000.
H. H. Cummings, M.D., Ann Arbor	1,000.
A. C. Curtis, M.D., Ann Arbor	15.
J. S. DeTar, M.D.	1,000.
Dickinson-Iron County Medical Society	80.
Eaton County Medical Society	70.
A. C. Furstenberg, M.D., Ann Arbor	1,000.
L. J. Gariepy, M.D., Detroit	1,000.
Genesee County Medical Society	1,000.
Robt. W. Gillman, M.D., Detroit	1,000.
Gratiot-Isabella-Clare County Medical Society	125.
Grand Traverse-Leelanau-Benzie County Medical Society	167.50
T. J. Heldt, M.D., Detroit	25.
Lee Hileman, M.D., Ecorse	10.
Hillsdale County Medical Society	95.
L. J. Hirschman, M.D., Detroit	1,000.
L. E. Holly, M.D., Muskegon	1,000.
Houghton-Baraga-Keweenaw County Medical Society	140.
R. J. Hubbell, M.D., Kalamazoo	1,000.
Huron County Medical Society	55.
Wm. A. Hyland, M.D., Grand Rapids	1,000.
Ingham County Medical Society	1,572.50
S. W. Insley, M.D., Detroit	1,000.
Jackson County Medical Society	350.
Joint Committee on Health Education	1,000.
Francis Jones, M.D., Lansing	1,000.
F. H. Lashmet, M.D., Petoskey	100.
Lenawee County Medical Society	125.
S. R. Light, M.D., Kalamazoo	100.
Macomb County Medical Society	130.
Manistee County Medical Society	100.
Marquette-Alger County Medical Society	135.
F. F. McMillan, M.D., Charlevoix	100.
Mason County Medical Society	35.
Mecosta-Osceola-Lake County Medical Society	45.
H. A. Meinke, M.D., Hazel Park	50.
Menominee County Medical Society	55.
Michigan Medical Service	10,000.
Mrs. K. B. Miner, Flint	1,000.
Monroe County Medical Society	145.
H. R. Moore, M.D., Newaygo	1,000.
H. L. Morris, M.D., Detroit	1,000.
Muskegon County Medical Society	310.
R. L. Mustard, M.D., Battle Creek	1,000.
Cora Boyce Neal, Grand Rapids	1,000.
Ontonagon County Medical Society	15.
Wm. H. Parks, M.D., Petoskey	100.
A. W. Petersohn, M.D., Battle Creek	25.
L. B. Rasmussen, M.D., Vicksburg	25.
Lawrence Reynolds, M.D., Detroit	1,000.
J. M. Robb, M. D., Detroit	1,000.
J. M. Robb, M.D., Detroit (Memorial to the late J. D. Bruce, M.D.)	100.
John Rodger, M.D., Bellaire	100.
G. B. Saltonstall, M.D., Charlevoix	1,000.
Sanilac County Medical Society	50.
C. A. Scheurer, M.D., Pigeon	20.
E. F. Sladek, M.D., Traverse City	5,000.
Ferris N. Smith, M.D., Grand Rapids	1,000.
St. Clair County Medical Society	220.
Shiawassee County Medical Society	1,000.
H. B. Steinbach, M.D., Detroit	100.
R. H. Stevens, M.D., Detroit	1,000.
C. L. Straith, M.D., Detroit	1,000.
R. H. Strange, M.D., Mt. Pleasant	1,000.
Jerrian VanDellen, M.D., East Jordan	100.
Ralph Wadley, M.D., Lansing	1,000.
R. V. Walker, M.D., Detroit	1,000.
Washtenaw County Medical Society	200.
H. L. Weitz, M.D., Traverse City	100.
C. G. Wencke, M.D., Battle Creek	10.
John O. Wetzel, M.D., Lansing	1,000.
E. L. Whitney, M.D., Detroit	25.
S. B. Winslow, M.D., Battle Creek	50.
E. R. Witwer, M.D., Detroit	1,000.
Margaret H. Zalen, M.D., Kalamazoo	5.

(Pledge Card on page 1590)

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DR. .....

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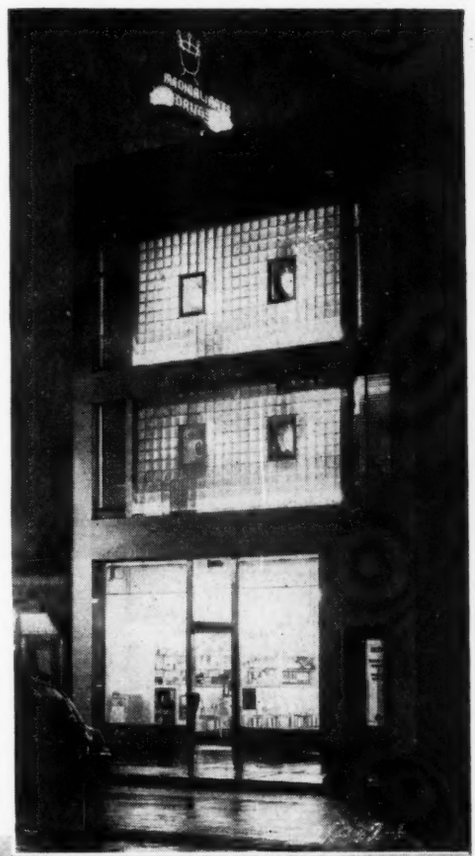

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You and Your Business

VOLUNTARY MEDICAL CARE PLANS APPROVED

The American Medical Association has adopted the plan of issuing approval of voluntary medical care plans which meet its standard. The first action was the approval of nine plans as follows:

California Physicians' Service, San Francisco; Iowa Medical Service, Des Moines; Michigan Medical Service, Detroit; Surgical Care, Inc., Kansas City, Mo.; Nebraska Medical Service, Omaha; Medical-Surgical Plan of New Jersey, Newark; Ohio Medical Indemnity, Inc., Columbus; Medical-Surgical Association of Pennsylvania, Harrisburg; and the Oregon Physicians Service, Salem.

Recently E. J. McCormick, Chairman of the Council on Medical Service, announced the approval of eighteen additional plans, making now twenty-seven approved. The newly approved plans are:

Physicians Association of Clackamas County, Oregon City, Oregon; Hospital Service Corporation, Birmingham, Alabama; Florida Medical Service Corporation, Jacksonville; North Idaho Medical Service Bureau, Lewiston; Genesee Valley Medical Care, Rochester, N. Y.; Hospital Saving Association of North Carolina, Chapel Hill; Oklahoma Physicians Service, Tulsa; Coos Bay Hospital Association, Coos Bay, Oregon; Pacific Hospital Association, Eugene, Oregon; Klamath Medical Service Bureau, Klamath Falls, Oregon; Group Medical and Surgical Service, Dallas, Tex.; The Dallas County Medical Plan, Dallas, Tex.; Surgical Care, Inc., Roanoke, Va.; Medical-Surgical Service, Inc., Clarksburg, W. Va.; Marion County Medical Service, Inc., Fairmont, W. Va.; Medical-Surgical Care, Inc., Parkersburg, W. Va.; the West Virginia Medical Service, Wheeling; and the Hospital Service Association, Oakland, Calif.

More than eighty voluntary plans sponsored by the medical profession are now operating, and application for approval have been received from several additional ones.

CANCER CONTROL PROGRAM—ANOTHER FIRST FOR MICHIGAN

Feeling that the time had arrived to co-ordinate, as far as possible, all state cancer control activities to avoid duplication of effort and expense, Wm. A. Hyland, M.D., President MSMS, has enlarged the Cancer Control Committee this year to include the members of the Professional Executive Committee of the American Cancer Society, Michigan Division, and representatives of the Michigan Department of Health.

Under the chairmanship of Norman F. Miller, M.D., Ann Arbor, three subcommittees have been formed to study (1) the problems of lay and professional education; (2) the collection and distribution of funds for cancer control; and (3) the extent of the cancer problem in Michigan together with the needs of local areas to render a more competent and adequate service to cancer patients.

To make the work of the Committee more effective, President Hyland has appointed F. L. Rector, M.D., a member of the Ingham County Medical Society, as full-time secretary with offices at 1313 East Ann Street, Ann Arbor. For the past five years Dr. Rector has been in charge of the cancer program of the Michigan Department of Health and has devoted most of his time to cancer education.

The Michigan Department of Health has been allocated $86,000.00 of Federal funds through the USPHS this year for cancer control activities in this state. The American Cancer Society, Michigan Division, will also have greatly increased funds at its disposal. The Cancer Control Committee will help plan programs and expenditure of these funds as well as offer a general information service on cancer problems in Michigan and elsewhere.

So far as is known, MSMS is the first state medical society to employ a full-time medically trained secretary to carry on its cancer control activities.

TWIN CONFERENCE IN DETROIT, FEBRUARY 2-8

The *Annual County Secretaries' Conference* and the *Annual Public Relations Conference* will be held jointly at the Book Cadillac Hotel, Detroit, on Sunday, February 2, from 10:00 a.m. to 4:30 p.m. By meeting together in this fashion, a super-excellent program can be expected. Every county and district society secretary is urged to attend as is each member of the Michigan State Medical Society Public Relations Committee, and the chairman of every county society public relations committee. These doctors are asked to bring with them the president or president-elect, the county bulletin editor, and other county society officers. Railroad transportation or auto mileage together with necessary overnight expenses at the hotel are authorized for secretaries, county public relations committee chairman and members of the MSMS Public Relations Committee. All other officers are invited to the meeting and noon-day dinner on February 2.

"Mystery" Meeting.—The noon-day program on February 2 will not be announced until the day of the meeting in Detroit. This will be a *surprise,* with an outstanding speaker!

COURSES IN MEDICAL ECONOMICS AT UNIVERSITY OF MICHIGAN

The University of Michigan Medical School sponsored a course on medical economics which began November 19. Three lectures were presented to the senior class on November 19, 22 and 26.

Four lectures also were presented to the junior class November 23-30 and December 7-14.

These courses were made possible through the co-operative endeavor of Dean A. C. Furstenberg of the University of Michigan Medical School and the officers of

(Continued on Page 1588)

Truly, this is America . . . Saturday Night!

"The feature picture? Starts about nine. Pretty good, too."

"I see Dr. Henry is still in his office."

YES . . . that's Main . . . where Elm runs into it. And that's the main stream of our national life where the products of the field, factory and laboratory funnel through the shops to the homes of the happiest—and healthiest—people on earth.

Their good health is no accident. It is part of our national design . . . product of the world's top standard of living, and the newest in medical knowledge.

Thanks to the community physician, there is no gap between the medical laboratories and the health needs of Main and Elm. The American practitioner, trained in freedom's tradition and alert to the new, sees to that. He is the bridge between the laboratory and the patient's bedside.

More . . . he is a member of that great profession . . . the physician . . . on whose initiative depends the interchange of medical experience between himself and his colleagues.

IN the scientific Ciba laboratories at Summit, New Jersey, we produce many of the fine pharmaceuticals of today. But even our medical scientists would be helpless in bringing their discoveries to bear on our national health—were it not for the practitioner's spirit of free inquiry . . . unfettered initiative.

CIBA PHARMACEUTICAL PRODUCTS, INC.
SUMMIT NEW JERSEY

COURSES IN MEDICAL ECONOMICS

(Continued from Page 1586)

the Michigan State Medical Society. Lecturers chosen to present some of the subjects included R. S. Morrish, M.D., Flint, Immediate Past-President, MSMS; L. Fernald Foster, M.D., Bay City, Secretary, MSMS; and Wilfrid Haughey, M.D., Battle Creek, Editor, JMSMS.

The opportunity to enlarge the program for classes to follow is presented. Congratulations, University of Michigan Medical School, on this forward step!

PROCEDURE FOR MSMS SPECIAL MEMBERSHIPS

WHEREAS, The presentation of candidates for special memberships in the Michigan State Medical Society is ordinarily made by the various delegates, and

WHEREAS, The customary procedure of presentation of these candidates is time consuming and repetitious, therefore, be it

RESOLVED, That a Committee of the House of Delegates be appointed to deal with all recommendations for special memberships, and be it further

RESOLVED, That all such recommendations for special memberships be presented to the chairman of this committee prior to the first meeting of the Annual Session of the House of Delegates for presentation in toto by the Chairman of this Committee at the Annual Session of the House of Delegates, and be it further

RESOLVED, That due and satisfactory notice of this procedure be given all secretaries of all county medical societies by information in the Secretary's Letters and by printed notice in THE JOURNAL of the Michigan State Medical Society for two succeeding months prior to the Annual Session of the House of Delegates of the Michigan State Medical Society.

—1946 MSMS House of Delegates.

CIVILIAN MEDICAL CONSULTANTS TO SECRETARY OF WAR

More than four hundred civilian physicians have now been appointed as consultants to the Secretary of War. The latest list included Arthur C. Curtis, M.D., Ann Arbor; Ivan E. Berlein, M.D., Detroit; Roscoe W. Cavell, Detroit; William A. Scott, Kalamazoo; James W. Hubley, M. D., Russell L. Mustard, Richard A. Stiefel, Wilbur O. Upson, M.D., all of Battle Creek; Paul L. Cusick, M.D., Detroit; Charles F. Wilkerson, M.D., Robert C. Kimbrough, Albert C. Furstenberg, M.D., William D. Robinson, M.D., Ann Arbor; Franklin H. Top, M.D., Detroit.

MEDICAL PLANS CONTINUE TO GROW

Enrollment in thirty-nine medical-surgical plans coordinated with Blue Cross hospital service plans reached a total membership of 3,026,446 on July 1, after a second quarter growth of 384,395 members, the largest in their history.

United Medical Service, affiliated with the New York City Blue Cross, chalked up the greatest second-quarter gain with 76,692 new members. The largest of the doctor-bill prepayment plans continues to be Michigan Medical Service, with 847,881 persons protected, followed by California Medical Service Groups with 290,000 members, Massachusetts Medical Service with 275,000 members, and United Medical Service, with 274,849 members.

New plans are: Kansas Physicians Service; New Mexico Physicians Service; Genesee Valley Medical Care, Inc., administered through the Rochester Blue Cross Plan; North Dakota Physicians Service; Surgical Care, Milwaukee; the recently established service of the Oregon Blue Cross; and the program offered by the Puerto Rico Blue Cross Plan.

VETERANS OPPOSE COMPULSORY HEALTH INSURANCE

The following resolution was unanimously adopted at the Twenty-eighth National American Legion Convention, in San Francisco, October 4, 1946.

Resolution

WHEREAS, Veterans who have served in the armed forces now have available to them hospital and medical care provided by the United States Government; and

WHEREAS, There are countless voluntary health insurance plans now being offered by the physicians and the insurance companies; and

WHEREAS, Proposed plans of compulsory health insurance would increase the tax burden and bring about regimentation of the medical profession; and

WHEREAS, All forms of compulsion are repugnant to our American way of life since our liberties and opportunities would be circumscribed; now, therefore be it

RESOLVED, That the National Assembly of the American Legion hereby expresses its opposition to compulsory health insurance.

ARMY TRAINED 115,000 MEDICAL TECHNICIANS DURING WAR

In the first figures made public on the number of technicians trained during the war, Major General Norman T. Kirk, The Surgeon General, reported that 114,997 enlisted men qualified as technicians from July, 1939, to June, 1946.

Twelve general hospitals and medical centers of the Army offered courses for enlisted technicians in X-ray, veterinary medicine, medicine, surgery, dentistry, laboratory, pharmacy, meat and dairy inspection, orthopedic machinery, medical equipment maintenance and sanitation. For those technicians who showed special progress, advanced courses were given.

Since the war ended and large numbers of enlisted technicians have been released to private life, many are now employed in a civilian capacity at the same jobs they learned in the Army.

Ex-GIs now may be found assisting dentists in their offices in making dental prostheses or preparing fillings. Farms and animal hospitals are profiting from the knowl-

(Continued on Page 1590)

ARMY TRAINED 115,000 MEDICAL TECHNICIANS DURING WAR

(Continued from Page 1588)

edge of veterinary technicians. Civilian hospital laboratories and clinics employ many ex-soldiers who learned their trade through schooling and practical experience in a war which saw 15,000,000 patients admitted to Army hospitals for treatment of practically every ill known to the medical profession.

HIGH SCHOOL ATHLETIC ACCIDENT BENEFIT PLAN

The Athletic Accident Benefit Plan of the Michigan High School Athletic Association, now in its seventh year, is one of voluntary co-operation on the part of high schools of the state in the interest of aid in the conduct of their physical education, intramural, and inter-scholastic athletic programs. Schools report the injuries received by their registered students directly to the Benefit Plan office, with proof of injury blanks completed by school officials and physicians or dentists attending students, and all claim payments are made directly to schools.

During the past six years, the Benefit Plan has paid 6,111 claims representing eight per cent of the students registered for a total of $93,206.24. At the present time, 533 Michigan high schools with 20,807 registered students are members of the plan. To date 1,566 injuries have been reported for this year.

Member schools report all injuries received by registered students within fifteen days after the injury occurs, thus inculcating upon the students the value of prompt attention to injuries, even though termed minor. The experience of Michigan and that of other states has resulted in improved playing conditions for all athletic contests and the development of safer playing equipment. Likewise, rules changes have resulted from a study of injury statistics. Due to the desirability of coverage of students participating in intramural athletics, the number of registered students has tripled in six years while the number of member schools has doubled.

The Athletic Accident Benefit Plan is sponsored and authorized by the Michigan High School Athletic Association, but the actual administration is vested in an Administrative Committee composed of five schoolmen of the state and the secretary, who is the State Director of High School Athletics. It is the purpose of this group to give all possible aid to the high schools of the state in their athletic programs, and to return as large a percentage as possible of the membership and students registration fees received, 88 per cent of which were returned during the year 1945-46 for allowed scheduled injuries. A unique phase of the Michigan plan is the consideration at the end of the school year of non-scheduled injuries, after all scheduled benefits have been paid; last year, over $4,000 were paid for such injuries.

The Benefit Plan appreciates the co-operation which it has received from schoolmen of the state, doctors of medicine and dentists in making it successful. Its phenomenal growth is indicative of the need which it has filled.

Name .....

Office Add..... City.....

Res. Add. ..... City.....

I hereby pledge to the

MICHIGAN FOUNDATION FOR MEDICAL AND HEALTH EDUCATION
2020 Olds Tower, Lansing 8, Michigan, for the twelve-month period beginning January 1, 1947, the sum of

TOTAL PLEDGE	PAID HEREWITH	BALANCE DUE
$	$	$

My contribution is

Please Check Your Choice [✓]

(1) In Cash ☐ to be paid in the total sum ☐ or in annual payments of $.....

or **(2) In War or Victory Bonds** ☐ to be paid in the total sum ☐ or in annual payments of $.....

or **(3) In Life Insurance** ☐

or **(4) As a Memorial** ☐ to the memory of:

.....

or **(5) In my Will** ☐

SIGNATURE .....

"How much is enough?" is a pertinent question in vitamin administration. Heretofore, vitamins were most extensively used for supplementation. Today therapeutic requirements are clearly recognized and differentiated from maintenance needs. Vitamins in therapeutic potencies are now recommended for the multiple deficiencies so frequently associated with certain acute and chronic illnesses. Upjohn provides vitamins in economical, effective forms and in potencies to meet therapeutic needs as well as maintenance requirements.

Upjohn
KALAMAZOO 99, MICHIGAN

FINE PHARMACEUTICALS SINCE 1886

UPJOHN VITAMINS

Editorial Comment

AN OUTDATED SLOGAN

Senator Taft has outlined a sensible alternative to the plan to place the country in a medical strait jacket under the guise of compulsory health insurance.

Instead of the Wagner-Murray-Dingell measure, which provides for a payroll tax to raise three to five billion dollars annually for free medical service to all people, Senator Taft favors a bill which would give free medical care to those unable to pay for it and leave the remainder of the nation unregimented.

This bill, introduced by Senators Taft, Ball and Smith, provides for federal aid in offering medical care, but the guidance of the program would be in the hands of the states and local governments so that local public opinion could be effective in its operation. The bill would enable federal money to be used to encourage the formation of voluntary health insurance funds by private and co-operative agencies.

It is estimated that the Taft-Ball-Smith Bill would cost $200,000,000 a year. This is a far cry from three to five billion dollars annually for the Wagner-Murray-Dingell system, which, Senator Taft pointed out, would call for the hiring of nearly 500,000 non-medical employes "to administer the plan and offices set up in every city and village in the United States."

Last week's elections sounded a loud protest against bureaucracy and regimentation. Thus they give a clue to the probable fate of the Wagner-Murray-Dingell Bill. As the features of the Taft-Ball-Smith Bill suggest, there are other methods of providing medical care for those unable to pay for it, and at a fraction of the cost of the bureaucratic measure. The secret slogan of the New Deal, "billions for bureaucracy," is happily out of date.—Editorial, *B.C. Enq-News*, Nov. 10, 1946.

THIS TOTTERING WORLD

Atlas was having a difficult time holding the world aloft until Socrates taught the world to look to reason for stabilization, and medicine under the stimulus of Hippocrates and Socrates initiated the age of enlightenment.

Under Greek influence, medicine for the first time was free and democratic. With the exception of the mad, and the morons, people learned to keep their heads, their own little worlds, squarely on their shoulders. This individual balance helped to secure collective equilibrium, thus enabling Atlas to hold the world in its appointed place.

The coming of Socialism and Communism in this modern era has robbed Atlas of the steadying influence which came through individual balance and we feel the world swaying on the Titon's tired shoulders. With North America looking upon socialistic trends as the way to redemption and the bureaucrats standing ready to rob Atlas of his main stabilizing force—medicine as a free enterprise—we may expect the crash unless we "Wake up America."

If Atlas, created for the task, is having a hard time with the wobbly cockeyed world, how can Mr. Altmeyer, the Surgeon General of the Public Health Service and their bureaucratic cohorts hope to cope with it after knocking the last prop out?

In the eyes of the thinking citizens of the United States, they are either too busy to look the proposed adventure squarely in the face or they are the world's prize egotists. Perhaps some of the cortex they are counting on may prove to be cheap cork. Shall we be damned by their exaltation, or shall we act upon the knowledge at hand and put them in their places?—Editorial, *Oklahoma State Medical Association*, October 1946.

EMIC

At the last meeting of the House of Delegates in May, the House passed a resolution which in effect stated that inasmuch as EMIC was conceived in an emergency during the war and inasmuch as the emergency has passed the Nebraska State Medical Association views the program at the present time as an unnecessary and unwarranted system in which the doctor who participates is selling his birthright for a mess of pottage. It is a softening up process whereby the bureaucrats are simply getting people accustomed to so-called free medical service in preparation for a huge compulsory sickness-insurance program. In the opinion of the House of Delegates the participation by the doctors is the best aid that our social uplifters can receive in promulgating a national system of medical care administered from Washington. THE JOURNAL was requested to bring this to the attention of the members of the Nebraska State Medical Association and to request them to co-operate in warding off socialization of the medical profession.—Editorial, *Nebraska State Medical Journal*, November 1946.

(EDITOR'S NOTE: See our editorial on this subject September, 1946, page 1227.)

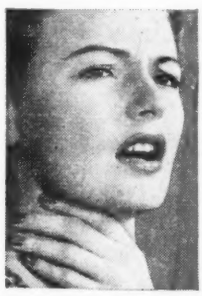
"The sulfonamide drugs given orally are recognized as the most valuable single therapeutic measure

in severe infectious sore throats."

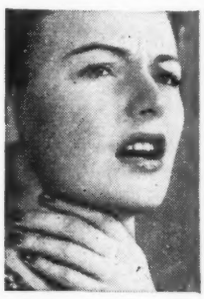
Weille, F. L.: M. Clin. North America 28:1115.

Eskadiazine . . .

S.K.F.'s fluid sulfadiazine for oral use . . . is particularly indicated for patients with painfully inflamed throats because:



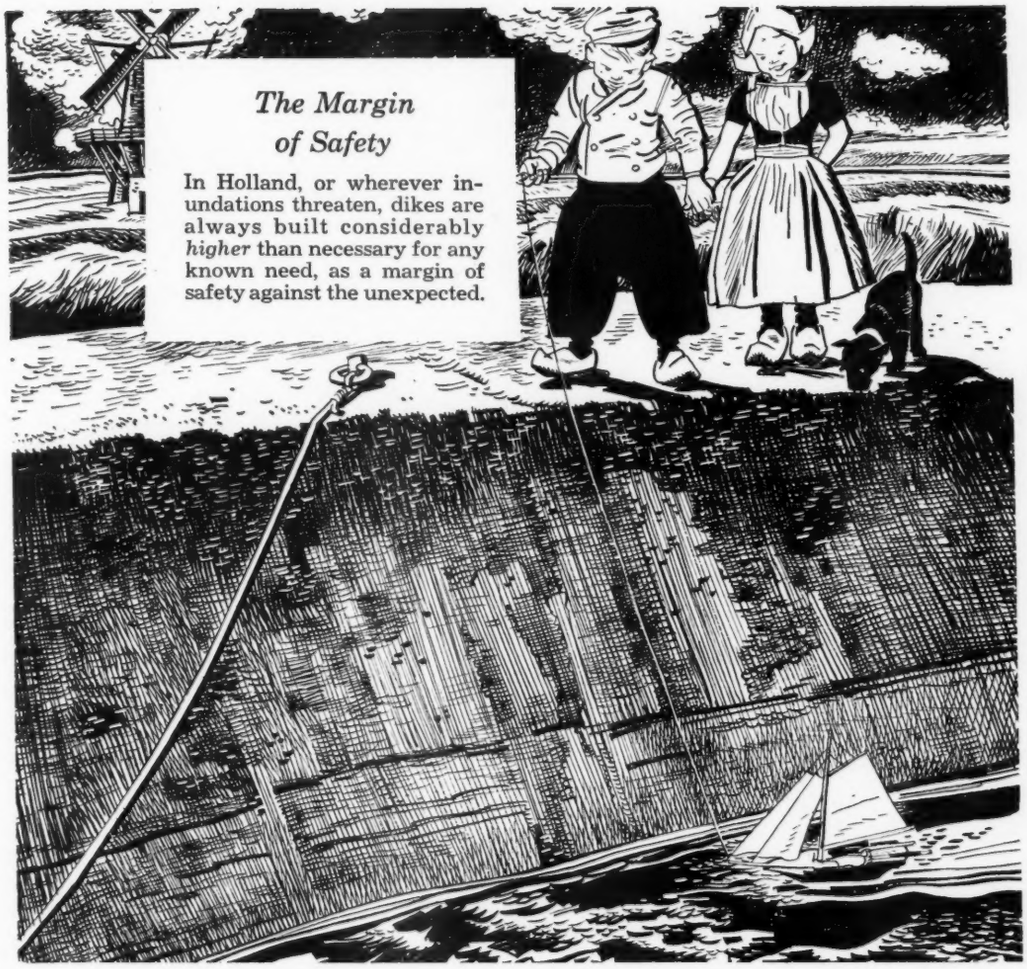
Eskadiazine
is so much easier to swallow
than bulky half-gram sulfadiazine tablets.



Eskadiazine
is so outstandingly palatable
that even infants and children actually like to take it.

Eskadiazine
is so quickly absorbed
that it provides desired serum levels 3 to 5 times more rapidly than tablets.

Smith, Kline & French Laboratories, Philadelphia, Pa.



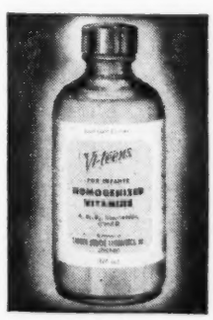
A similar margin of safety is found in *Vi-teens Homogenized Vitamins* . . . protection well beyond optimal needs of children. This emulsion is especially palatable in milk, water, juice or formula. Full size sample package for physicians upon request.

One teaspoonful (5 cc) of Vi-teens Homogenized Vitamins contains the following:

Vitamin A (from fish liver oils)	3000 U.S.P. Units
Vitamin B_1	1 Milligram
Vitamin B_2	1.5 Milligrams
Vitamin C	40 Milligrams
Vitamin D	800 U.S.P. Units
Niacinamide	4 Milligrams

Lanteen

LANTEEN MEDICAL LABORATORIES, Inc. . . . CHICAGO 10



Brighter horizons for the petit mal patient

With the development of Tridione, children handicapped by frequent petit mal, akinetic and myoclonic seizures are offered new hope of attaining a more normal life. A product of Abbott research, Tridione has been tested thoroughly in clinical practice and has been found to give immediate and lasting benefits in numerous petit mal cases *not helped by other forms of medication.* For example, in one group of 50 patients who had not responded to other treatment, Tridione brought a cessation of seizures in 28 percent, reduced the seizures to less than one-fourth of the usual number in 52 percent, and had little or no effect on 20 percent. In some instances, the seizures once stopped *did not return* when medication was discontinued. Tridione also has been shown by clinical tests to produce beneficial effects in the control of certain psychomotor cases. Tridione is supplied in 0.3-Gm. capsules in bottles of 100 and 1000. Literature on request. ABBOTT LABORATORIES, North Chicago, Illinois.

Tridione

REG. U. S. PAT. OFF.

(3,5,5-TRIMETHYLOXAZOLIDINE-2,4-DIONE, ABBOTT)

Richards, R. K., and Perlstein, M. A. (1945), *Tridione, a New Experimental Drug for the Treatment of Convulsive and Related Disorders, Proc. Chicago Neurological Soc., Jan. 9; and* (1946), *Arch. Neurol. and Psychiatry, 55:164, February.*

Lennox, W. G. (1945), *Petit Mal Epilepsies: Their Treatment with Tridione, J. Amer. Med. Assn., 129:1069, December 15.*

DeJong, R. N. (1946), *Effect of Tridione in the Control of Psychomotor Attacks, J. Amer. Med. Assn., 130:565, March 2.*

Thorne, Frederick C. (1945), *The Anticonvulsant Action of Tridione, Psychiatric Quarterly, October.*

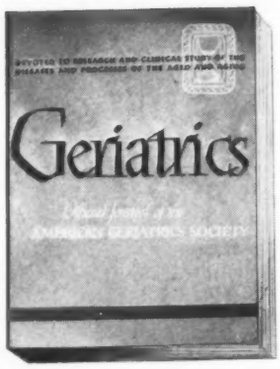
Erickson, T. C., Masten, M. G., and Gilson, W. E. (1946), *Observations on the Use of Tridione in the Treatment of Epilepsy, Presented before Amer. Neurological Soc., San Francisco, June.*

Every day more gynecologic conditions call for Ciba steroid hormones

In an ever-increasing number of female patients, the greatest aid to recovery and normal maintenance lies in hormone therapy. To the long-accepted indications . . . dysmenorrhea, the menopause, primary and secondary amenorrhea, threatened or habitual abortion . . . are being added many common conditions not formerly thought amenable to endocrine therapy. In the important field of the estrogens, Ciba offers the chemically pure and esterified derivatives of α-estradiol, the natural estrogen. Not being metabolic breakdown products, these substances provide highest potency, and further, produce the feeling of well-being not attained by the use of exogenous synthetic drugs.

DI-OVOCYLIN* (α-estradiol dipropionate), **OVOCYLIN*** (α-estradiol)

*Trade Marks Reg. U. S. Pat. Off. and Canada



—Goldzieher, Geriatrics, 1:226, 1946.

"Foremost among the anabolic hormones . . . with respect to its therapeutic usefulness in geriatrics is testosterone. Testosterone is the agent actually responsible for the greater muscular development and power of the male. . . . Distinction in treating males and females is necessary only in respect to dosage, for testosterone should be given to the elderly female within such quantitative limits as to forestall the appearance of signs of masculinization."

PERANDREN

Trade Mark Reg. U. S. Pat. Off. and Canada (TESTOSTERONE PROPIONATE)

This pioneer brand of testosterone propionate provides the esterified male hormone in ampul form for injection. Perandren ampuls are ideal for initiating therapy, as their effect is the most potent of that produced by any of the available forms of testosterone. Medical investigation is continually widening the field of usefulness of Perandren, until its value is now utilized in almost every medical specialty.

METANDREN LINGUETS FOR SUBLINGUAL ABSORPTION

Metandren Linguets—Trade Mark Reg. U. S. Pat. Off. and Canada (Methyltestosterone)

In many cases for which long-continued administration of testosterone is necessary, Metandren Linguets are often found the most convenient and economical medication. This unique Ciba-originated form of the hormone provides the ease of oral dosage with greater efficiency than is possible by ingestion. The Linguet is sublingually absorbed directly into the systemic circulation, by-passing the liver and thus greatly reducing the inactivation known to take place in that organ. Lisser (Cal. & West. Med., 64:177, 1946) states: "The most economical manner, and also efficient way of administering testosterone, is in the form of methyltestosterone, Linguets. . . . This route is two to three times as efficient as when the tablets are swallowed."

CIBA

CORAMINE AMPULS

IN SHOCK··IN CARDIAC DYSPNEA

CORAMINE LIQUID

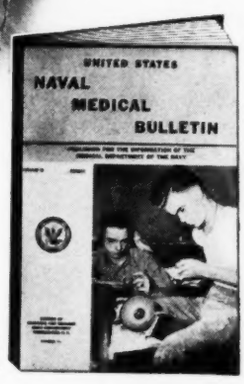
Give intravenous Coramine first, then follow with plasma, is the advice of Gunther[1] on treatment of shock. "There is no contraindication," he states, "for the use of the drug in the treatment of circulatory collapse, in shock from burns, traumatic and surgical shock, or from shock attendant on hemorrhage. The toxicity is very low. Thirty cc. have been given intravenously over a period of 30 minutes with beneficial results in the treatment of severe surgical shock."

CORAMINE FOR ORAL ADMINISTRATION

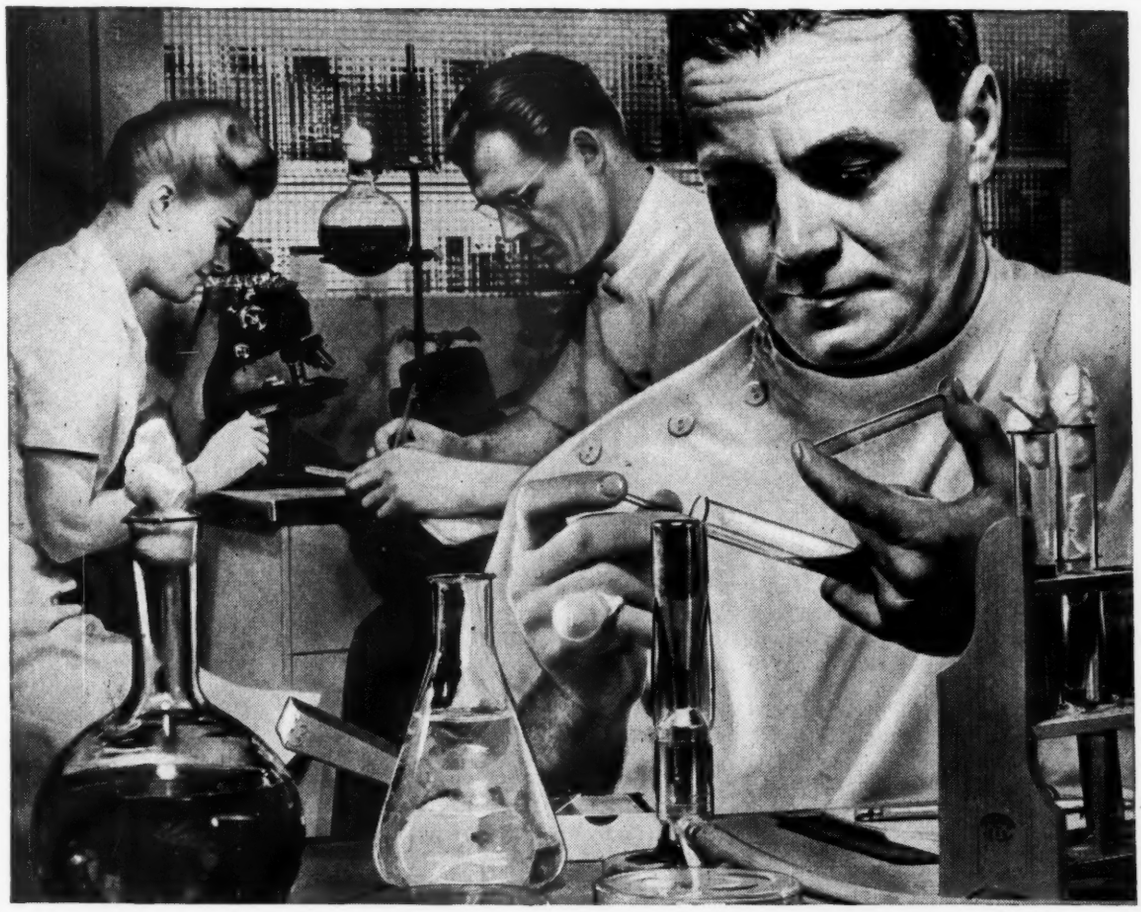
Coramine solution for oral administration has for over 20 years given gratifying results in cases of cardiac disease. Most striking of the results is the favorable action on the respiratory distress of these patients. Coramine orally results in a progressive relief, usually achieving maximal effect in a period of a few days. Brower and Korry (Northwest Med., 35:89, 1936) advise trial of Coramine in all patients subject to anginal attack or presenting other evidence of impaired coronary circulation. The margin of safety of Coramine and its lack of cumulative effect permit its use over extended periods of time.

Coramine—Trade Mark Reg. U. S. Pat. Off. and Canada
(Nikethamide)

CIBA



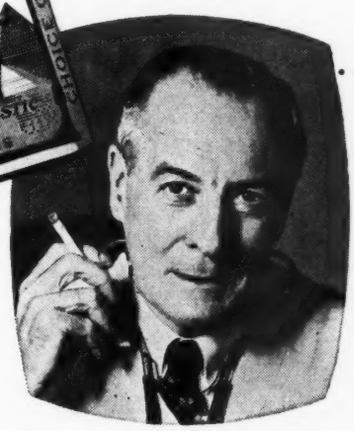
1. Gunther, L., U. S. Naval Med. Bull., 44:300, 1945.



The Doctors behind the Doctor

● Magical penicillin . . . the amazing "sulfas". . . and now the new streptomycin . . . Thank the men of research medicine for those . . . and for all the other valuable aids they have placed in the doctor's "little black bag."

Biochemists and bacteriologists . . . pathologists and physiologists . . . whatever the field of research . . . they are, first and foremost, *doctors!* And, like all doctors, they are tirelessly devoting their lives to the cause of human health and happiness.



R. J. Reynolds
Tobacco Company,
Winston-Salem, N. C.

According to a recent independent nationwide survey:

MORE DOCTORS SMOKE CAMELS

than any other cigarette

why Dexedrine is so beneficial in menstrual dysfunction

"The Central Nervous Stimulant of Choice"

Dexedrine therapy not only alleviates the mental depression and psychogenic fatigue which ordinarily accompany dysmenorrhea; but also, through its marked amelioration of mood, beneficially alters the patient's reaction to pain.

Smith, Kline & French Laboratories, Philadelphia, Pa.

Dexedrine Sulfate tablets

(dextro-amphetamine sulfate, S.K.F.)

MINIMIZES GASTROINTESTINAL DISTRESS

Gastrointestinal distress attributable to the presence in the intestinal tract of excessive amounts of readily fermentable sugars can be minimized by specifying CARTOSE* as the mixed carbohydrate to be used in modifying milk for infant feeding formulas.

CARTOSE supplies balanced proportions of nonfermentable dextrins in association with maltose and dextrose, thus providing spaced absorption.

Its content of dextrins favors the development of a preponderant beneficial acidophilic intestinal flora.

CARTOSE

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Mixed Carbohydrates

Available in bottles containing 1 pt. through recognized pharmacies only.

*The word CARTOSE is a registered trademark of H. W. Kinney & Sons, Inc.

H. W. KINNEY & SONS, INC. (Kinney trademark) COLUMBUS, INDIANA

SUBJECT: "YOUR DOCTOR"
AUDIENCE: 23 MILLION PEOPLE

This is the 200th message published by Parke, Davis & Company in the interest of the medical profession. It appears this month in full color in LIFE and other leading national magazines.

Some things you should know about **your doctor**

No. 200 in a series of messages from Parke, Davis & Co. on the importance of prompt and proper medical care.

IN TIMES of distress, almost everyone turns to his doctor. But when things are going smoothly, some people are apt to take him pretty much for granted.

However, if you consider your doctor's service to you and to the country—if you consider the skills he must have, the sacrifices he must make, the hardships he must work under—then it isn't very easy to take him for granted.

To become a doctor usually requires three to four years of pre-medical education, four years of medical school, and another year or more as an interne. But this by no means represents the end of his training.

Do you realize how much time your doctor has to spend in *continuing* study—so he can bring you the benefits of all the latest medical advances?

During a year the average American doctor devotes the equivalent of about a month to the study of medical books and journals and to attending medical meetings.

It's an old story about how many patients a doctor has to see every day, how much of his time he devotes to charity, how many calls he has to make in the middle of the night. But did you ever think of it this way:

When you leave your office or job, the chances are that you're free from business duties for another day. You can do whatever you feel like—you can dig in your garden, visit friends, have a quiet evening at home with your family, drop in at a movie, or go for a drive. But your doctor's work is never finished. He's always—every waking and sleeping moment—responsible for the patients under his care.

Yes, it takes a lot of things to be a good doctor. It takes physical and nervous stamina. It takes patience. It takes great tact. It takes an understanding of people. It takes sound judgment. It takes unusual scientific and scholastic aptitude. It takes a sympathy for the unfortunate. Above all, it takes a spirit of humanitarianism and a sense of service.

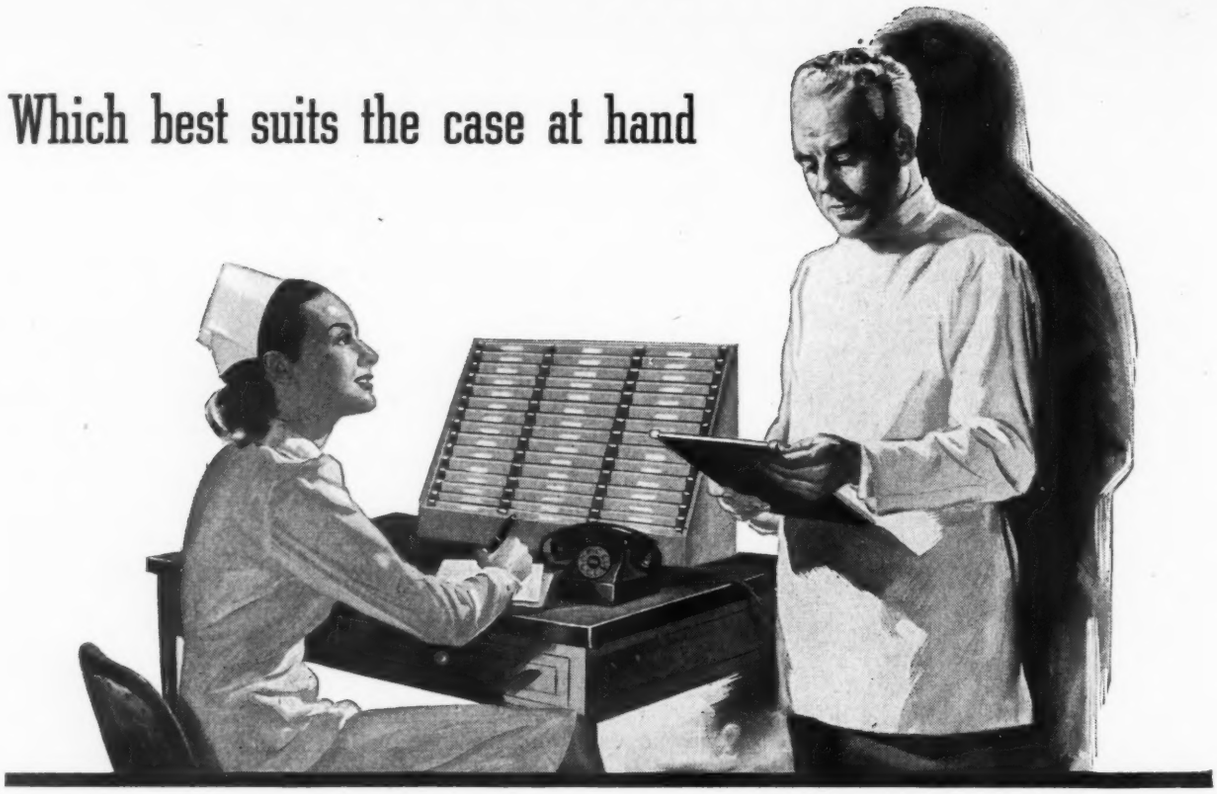
Tall order, isn't it? Yet thousands and thousands of American physicians have all these qualities—and more. They are outstanding men and women. America should never cease to be proud of them.

Makers of medicines prescribed by physicians

PARKE, DAVIS & CO.

Research and Manufacturing Laboratories • Detroit 32, Michigan

Which best suits the case at hand



ALTHOUGH most of the barbiturates do have the same general effects, there is a wide variation in their duration of action. This difference is particularly important because it enables the physician to choose the product which best suits the case at hand. For a short-acting barbiturate having a high therapeutic index and a relatively wide margin of safety, 'Seconal Sodium' (Sodium Propyl-methyl-carbinyl Allyl Barbiturate, Lilly) is often the choice. 'Seconal Sodium' has definite use in insomnia, nervousness, extreme fatigue with restlessness, and similar conditions.

In obstetrics, too, 'Seconal Sodium' is often preferred to the longer-acting barbiturates. 'Seconal Sodium' is supplied in 3/4-grain and 1 1/2-grain pulvules. Available on prescription at leading drug stores and in all hospital pharmacies.

Lilly

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INDIANAPOLIS 6, INDIANA, U. S. A.

Typhoid Vaccine, Lilly

Typhoid Mixed Vaccine, Lilly

In spite of our highly developed sanitary safeguards, population shifts, storms, and floods sometimes compel the physician to immunize large numbers of people against typhoid and paratyphoid fever. Substantial stocks of Typhoid Vaccine, Lilly, and Typhoid Mixed Vaccine, Lilly, are kept under proper refrigeration by your favorite prescription pharmacy, ready at hand for any emergency. Specify Lilly.

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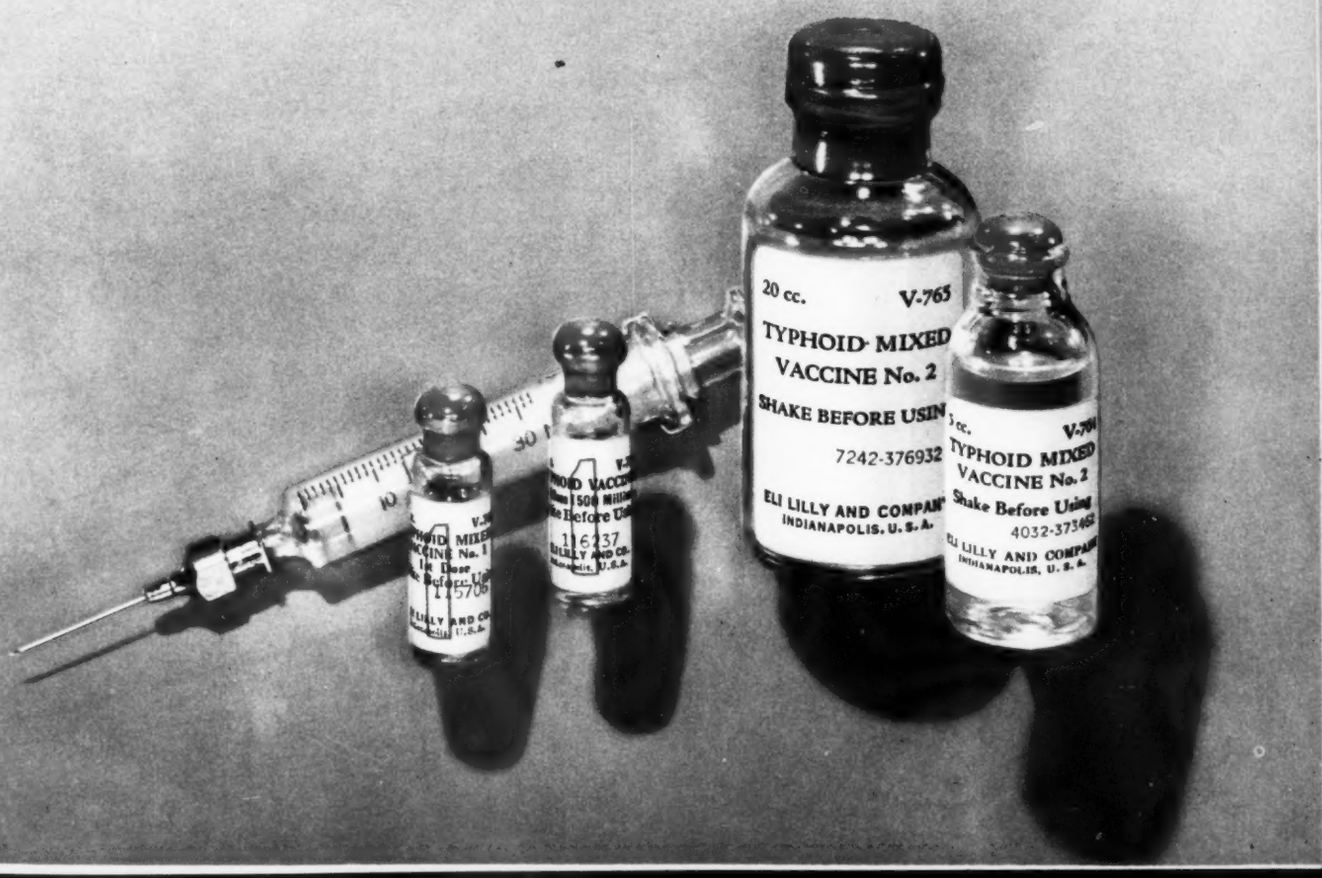

ILLUSTRATION BY HAROLD ANDERSON

Unselfish service

CHRISTMAS morning. As a departure from his usual strenuous labors, the physician joins his wife and daughter in holy devotion. No less a summons than the symbolic "cry in the wilderness" is the usher's signal. Somewhere, out there, someone needs him. There may have been an accident. Or perhaps on this day of days, a new life is to come into the world. Professional responsibility cannot be denied.

Unselfishness is among the noblest of human virtues. This reality applies to a business no less than to a man. No commercial enterprise, no matter how practical, can hope to perpetuate itself from one generation to another unless it renders a conscientious, needed service. Eli Lilly and Company seeks, first of all, to make sound contribution to medical practice. All other objectives are secondary.

A picture of The Good Samaritan provided the inspiration that

eventually led to the founding of Eli Lilly and Company